SEPTEMBER 16, 1933

Railway Age

Founded In 1856

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The Need for Railway Buying

"No other industry has benefited more up to the present time by the improvement in general business than the railroad industry. No other industry would benefit more by a continuance of the improvement. No other news that could be published would create a more favorable public sentiment toward the railroads, and have a more stimulating effect upon business confidence and general business activity, than the news that the railroads had concertedly adopted a program to use their increased earnings and money that they can borrow from the government, to make large increases in their employment of labor and their purchases of equipment and supplies."

The statement above was included in an editorial in the September 9, 1933, issue of the RAILWAY AGE.

Armco Railroad Products Illuminate "Buying Path" Ahead

WHEN your locomotives leave the round house to make their runs, they look the part if they are dressed in special Armco Jackets. They can and should be a credit to your road. Even freight and yard locomotives must look presentable. These Armco Jacket sheets with their dense, paint-holding or highly-polished surfaces, help them retain that smartly-dressed appearance. Another thing to remember is that Armco Jacket Sheets are exceptionally rust-resisting, that they actually last through more shoppings. Making your materials dollar go so far is real thrift nowadays. Why not invite us in to discuss locomotive jacket economy? Our nearest office is at your service this very day if you need it. Write for full particulars.

ARMCO
WHEELS • SHEETS • PLATES
for *thrifty* railroads

ARMCO RAILROAD SALES CO.

Subsidiary of
The American Rolling Mill Company

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Published weekly by Simmons-Boardman Publishing Company, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879.

I *like to* Go *when* I *have to* Go

When I make my plans to leave for somewhere at 7 o'clock, I hate to wait around till 8:15 before the last member of the party is ready. It wastes my time, spoils my disposition and makes me late at the other end. That's why I like to take the train—it starts on schedule and arrives *on time.*

I hate to sit cramped for hours, accommodating my legs and feet to extra luggage on the floor. I like to sit *comfortably* stretched out when I travel —and so I take the train.

I don't like to dodge around those giant inter-city trucks. They frighten me. They look dangerous. They make good drivers nervous. They make strong men to swear and lovely ladies to scream. It's almost as bad to be scared half to death as it is to be killed. Talk about road hogs—those inter-city trucks are worse than hogs—they're insolent, roaring, swash-buckling bullies . . . . They're so big they'll mess with any ordinary conveyance—but they *never bother me* when I ride on the train.

I don't like these drivers that are always looking for a road race. A race is all right at Indianapolis or Daytona Beach, but it's no good on Trunk Highway 13. Of course, every so often one of these speed boys races a train to the crossing, and I always feel sorry for the poor saps that were riding with him. They'd be *much* better off riding on the train.

I like to *read* as I travel.

I like to sleep at night *stretched out* horizontally.

I like to take my *clothes off* when I go to bed.

I have slept on the ground many a time—but when I'm traveling to arrive somewhere—on a business trip or the start of a vacation—I like to get sleep that leaves me *rested.*

I like to wash my face and hands at intervals, and it may be a foolish notion, but I like to dry them on a clean towel. On a *private* towel.

That's why I take the train.

I like a drink of water when I'm *thirsty.* I may not care about it when someone else is thirsty, or when we come to a drinking place on regular schedule, but when I myself am thirsty. And I can have it on the train.

I like to eat when *I myself* am hungry. They let me do that on the train.

I have never been able to schedule a business trip according to weather. Very often I am obliged to travel when it is bitter cold, or in the midst of heavy rain, snow or fogs. The train takes me through on schedule—rain or shine, hot or cold, day or night, summer or winter, low ceiling or high. It's the *dependable* factor in travel.

Worst of all, I hate *watchful waiting* for the last twenty miles before the next rest stop. I know that everyone else is watchfully waiting, too. The air becomes *tense.* The situation nerve-racking. Friendship ceases—for when a lot of people want to go out at the same time, and there's only one door to go out through, and only one door to go in through, and only one or two you-knows when you get to the place—then, I say, *friendship ceases* and strife begins. Every man for himself, and devil (or cramps) take the hindmost.

No sir, I much prefer to go when I have to go. That's another reason why I take the train.

★ ★ ★

NO ADVERTISEMENT IN RECENT YEARS HAS AROUSED MORE COMMENT IN RAILROAD CIRCLES THAN THE ABOVE, PUBLISHED IN A RECENT ISSUE OF ADVERTISING AGE. IT WAS WRITTEN BY WALLACE MEYER, VICE-PRESIDENT OF REINCKE-ELLIS-YOUNGGREEN & FINN, *Advertising,* CHICAGO

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THESE NEW BURROUGHS MACHINES HANDLE

INCREASED DEMAND FOR STATISTICS AND FIGURES

These new machines . . . new features . . . new developments are especially timely in view of the increased demand for more complete, more detailed, more accurate figures and statistics about your business. Burroughs can assist in bringing greater speed and greater simplicity to every kind of accounting and statistical work. Many of these new machines write several records in one operation; many machine operations are automatic; all are time-saving. Telephone the local Burroughs representative for complete information. Or write directly to Burroughs Adding Machine Co., Detroit, Mich.

For Sales Analyses

New Burroughs machines for analyzing sales by departments or commodities; by territories; by kind or size of containers or packages; with taxes, exemptions, deductions. Usually only one handling of the original record is required. Cost of sales computed quickly, easily and accurately.

For Cost and Production Records

Newly designed Burroughs machines—computing by high-speed direct multiplication——automatically accumulate multiple totals of hours, pieces, amounts. This greatly simplifies handling labor, material, and overhead figures, whether by job cost, standard cost, process cost, or any other plan.

For Payroll, Timekeeping and Labor Statistics

New Burroughs machines compute earnings and, in one operation, prepare all records, including employees' earnings, payroll sheet, pay check or pay envelope. They automatically accumulate such labor statistics as hours, earnings, various deductions, and net pay for any desired period as a by-product.

For General Statistics

Newly designed Burroughs machines—with an especially high-speed computing mechanism—that calculate percentages; that pro-rate overhead and other expenses; that calculate cost per unit and provide other similar figure information and statistics.

NRA MEMBER U.S. WE DO OUR PART

Burroughs

NRA MEMBER U.S. WE DO OUR PART

Published every Saturday by the Simmons-Boardman Publishing Company, 1309 Noble Street, Philadelphia, Pa., with editorial and executive offices: 30 Church Street, New York, N. Y., and 105 West Adams Street, Chicago, Ill.

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Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

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Are the Railways Capitalizing on Pullman Service? ..... Page 395

This is Article No. 8 of the Traffic Development Series; it discusses the question of whether or not the railroads are making the most of the fact that they alone can offer patrons night's rest while traveling.

Marked Reductions in Tie Renewals 399

A compilation of statistics from annual reports of the railroads for 1932 which show extent of deferred application.

General Electric Air Conditioning for Pennsylvania Diner 402

T. F. Perkinson and F. L. Sahlmann of the Transportation Engineering department, General Electric Company, describe this system that incorporates a 5½-ton motor-driven compressor with a 20-kilowatt gear-driven generator which supplies all power requirements.

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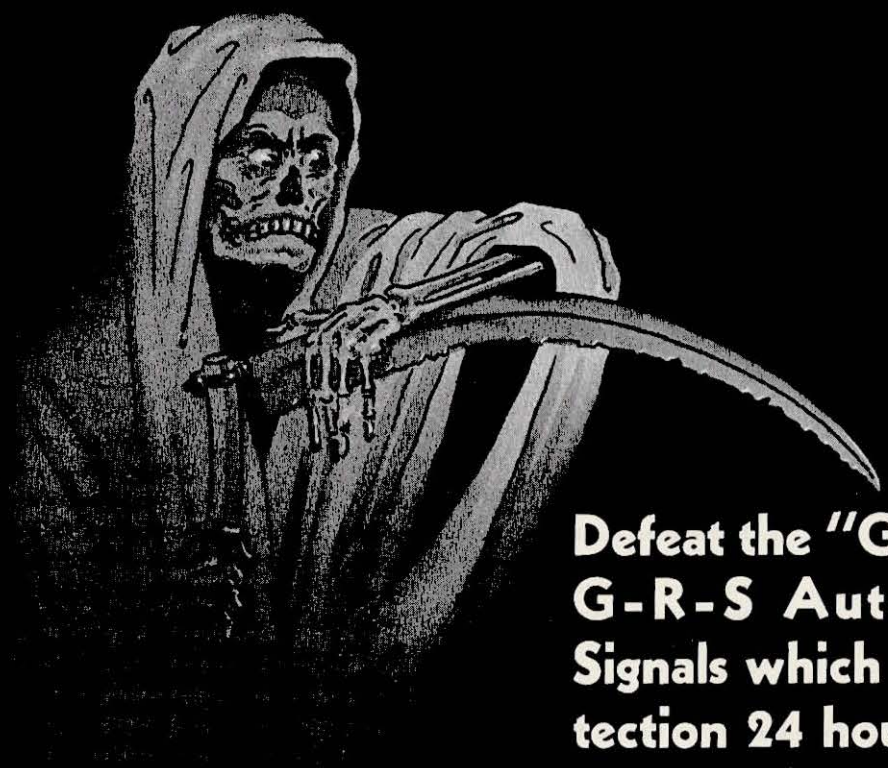
REDUCE CROSSING

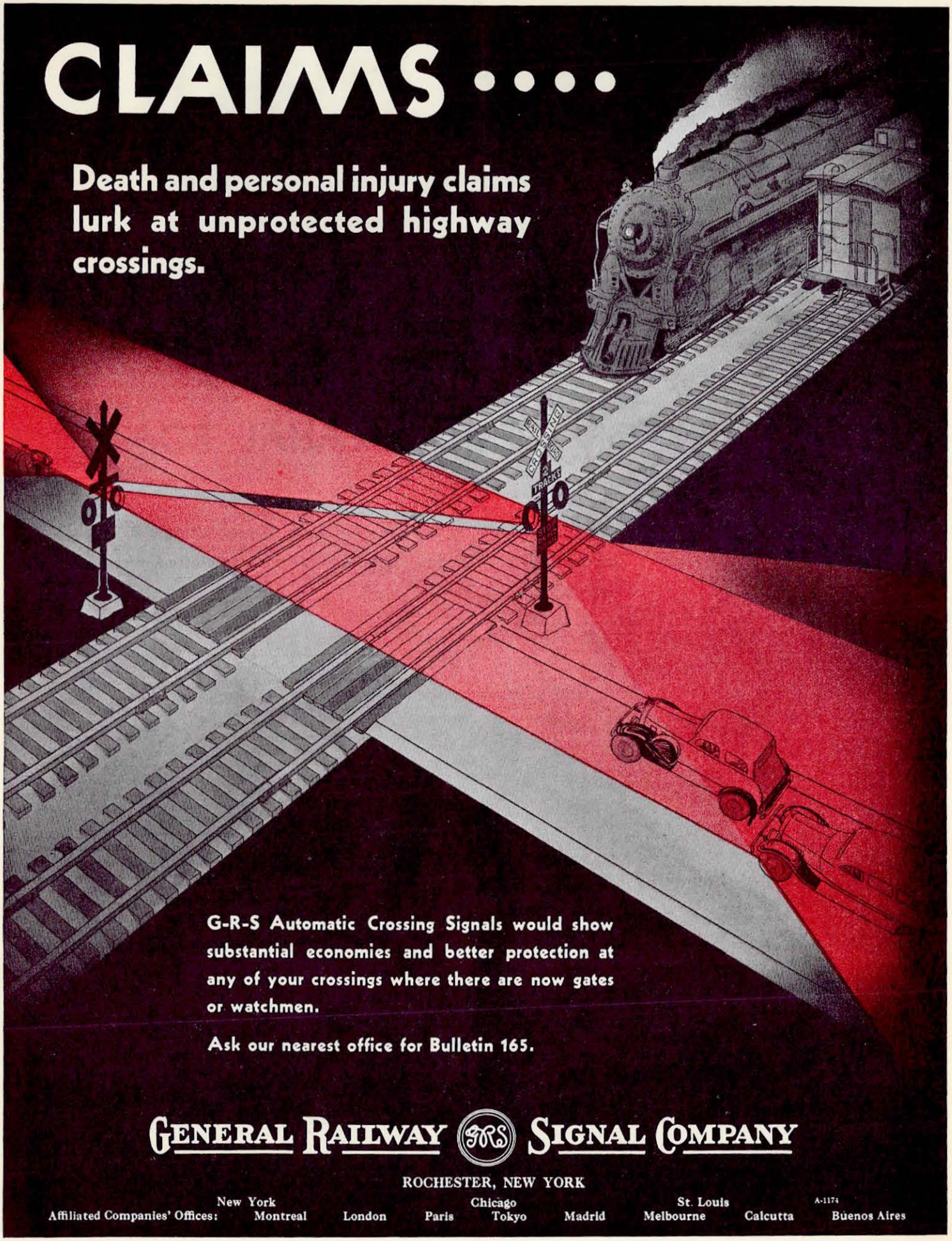


Defeat the "Grim Reaper" with G-R-S Automatic Crossing Signals which give positive protection 24 hours a day.

GRS

CLAIMS ....

Death and personal injury claims lurk at unprotected highway crossings.



G-R-S Automatic Crossing Signals would show substantial economies and better protection at any of your crossings where there are now gates or watchmen.

Ask our nearest office for Bulletin 165.

GENERAL RAILWAY GRS SIGNAL COMPANY

ROCHESTER, NEW YORK

Affiliated Companies' Offices: New York, Montreal, London, Paris, Chicago, Tokyo, Madrid, St. Louis, Melbourne, Calcutta, Buenos Aires

A-1174

THE CHARM OF THE OLD CANAL BOAT—

lends glamour to the early history of transportation. Even old locomotives have a romantic appeal for those interested in railroad history.

BUT—

Old or obsolete locomotives belong in a museum and not on the track.

They are unable to haul heavy tonnage at the speeds demanded today.

Their fuel consumption and repair costs make them expensive to operate.

They act as a "drag" on the better locomotives now in operation.

To insure better operating income, the systematic replacement of obsolete power should be started *now*.

It takes Modern Locomotives to make money these days!

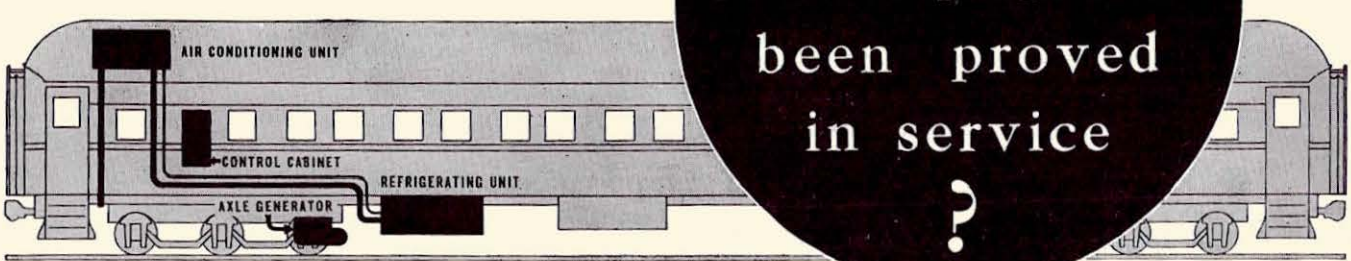
THE BALDWIN LOCOMOTIVE WORKS

PHILADELPHIA

BEFORE YOU BUY AIR CONDITIONING—

Ask this question

★ Has the economy of your equipment been proved in service ?



Westinghouse provides complete Air Conditioning Equipment, from rail to roof, that is easy to install.

IN 1,000,000 car miles of operation, Westinghouse railway air conditioning has proved its reliability and economy.

On one railroad ten complete sets of this equipment have operated since June, 1932, accurate operating records having been kept by the railroad throughout the entire period of service.

Reports based on these records indicate that a very small increase in patronage—one-third to one-half passenger per car per day—will pay *all* the costs of operating this equipment.

★ *One of a series of vital questions which should be asked by railroad officials and engineers before buying air conditioning equipment. A complete set of answers to these questions can be obtained by writing to Westinghouse Electric, Room 2-N, East Pittsburgh, Penna.*

Westinghouse T 79603

Quality workmanship guarantees every Westinghouse product

PULLMAN, INCORPORATED

on behalf of its subsidiaries

THE PULLMAN COMPANY
PULLMAN CAR AND MANUFACTURING CORPORATION
STANDARD STEEL CAR CORPORATION
PULLMAN-BRADLEY CAR CORPORATION

announces
creation of a Research Department
for development of transportation equipment
under the supervision
of

Mr. E. E. ADAMS, Vice President.

—o—

You are invited to use this service for
consideration of your problems in
the above field.

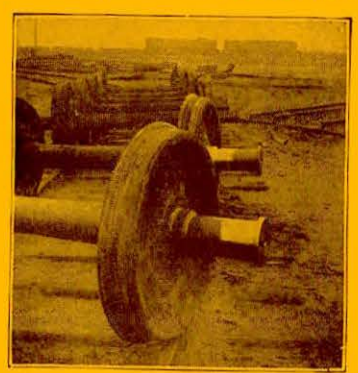
Chicago, Illinois.

"We Do Our Part"

And Heartily Endorse PRESIDENT ROOSEVELT'S PROGRAM For Manufacturers

NATIONAL RECOVERY ACT NRA MEMBER U.S. WE DO OUR PART

NO-OX-ID IRON+OX=RUST TRADE MARK
The Original Rust Preventive



Over one hundred and fifty railway and marine interests use NO-OX-ID because of its superior effectiveness, ease of application, and low cost. Car journals, water tanks, bridges, steel cars, and a long list of equipment are protected with NO-OX-ID in storage and service, either with a single coat of NO-OX-ID or using it as a prime coat under paint to match color schemes. Greatly reduces breakage of locomotive springs. Inquire about NO-OX-ID as it applies to equipment for which you are responsible.

FOR nearly a half century the Dearborn Organization has worked for economical steam production through control of scale, foaming, pitting and corrosion in locomotive boilers. The saving in fuel has amounted to hundreds of millions of tons and other savings in proportion.

Changing operating conditions and new attainments in efficiency have kept Dearborn young in viewpoint. Our duty to our customers and to ourselves keeps us in the forefront in development of efficient water treating methods and economies.

The Dearborn story, so often told, is always new in its more recent aspects. Our work now is broader in scope than ever before.

Daily, reports reach us from throughout the world commenting favorably on results of the use of Dearborn Treatment. Our customers stay with us year after year, and we are now successfully serving a large percentage of the world's leading railroads.

Back of these successes is *Dearborn's Code* of using science to work out *every* water problem to a satisfactory solution. The great Dearborn Laboratories, the experience of our practical engineers and the Dearborn method of constant laboratory control assure these results.

Dearborn has the pride of years, the pride of pioneers of yesterday and leaders today. It is in this knowledge of what we have accomplished and can accomplish that we confidently offer our complete service in the solution of water troubles. Send us samples of the water supplies and description of your operating conditions, or let us send a competent man to make a comprehensive survey and submit to you recommendations based on the economical methods that have established and maintained the name of Dearborn through the years.

DEARBORN CHEMICAL COMPANY
310 S. MICHIGAN AVENUE, CHICAGO 205 E. 42nd STREET, NEW YORK
CANADIAN OFFICE and FACTORY: TORONTO

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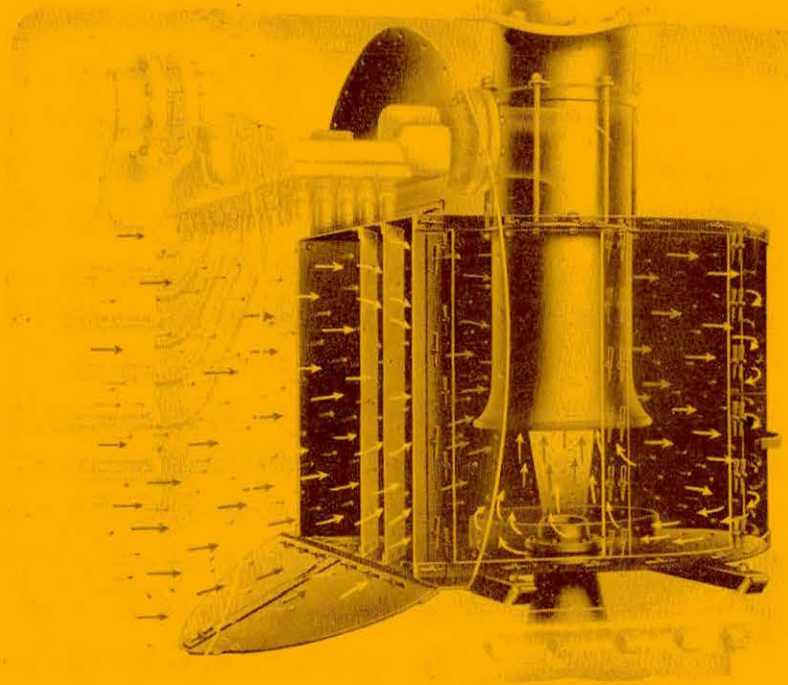
TRADE MARK REGISTERED

CYCLONE FRONT END



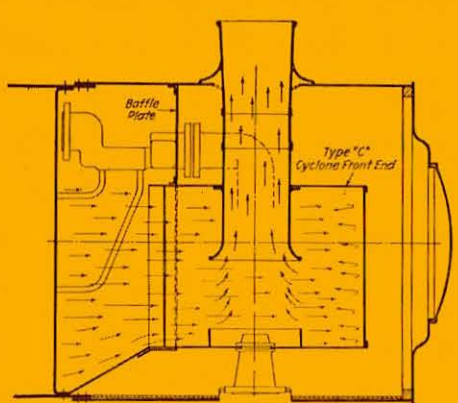
SERVICE RESULTS:

Sparkless operation • Larger nozzle area • Decreased back pressure

Improved steaming • Reduced fuel consumption

No interference with draft from leaking steam pipes or nozzle stand

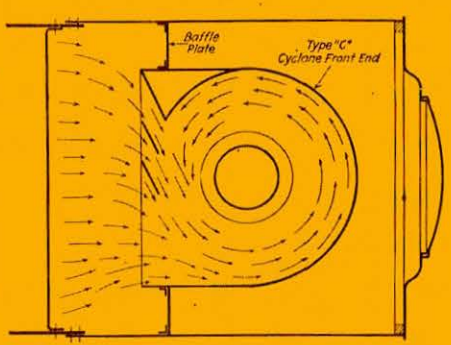
No interference with draft from air leaks into the smokebox



Increased hauling capacity

Increased speed of locomotive

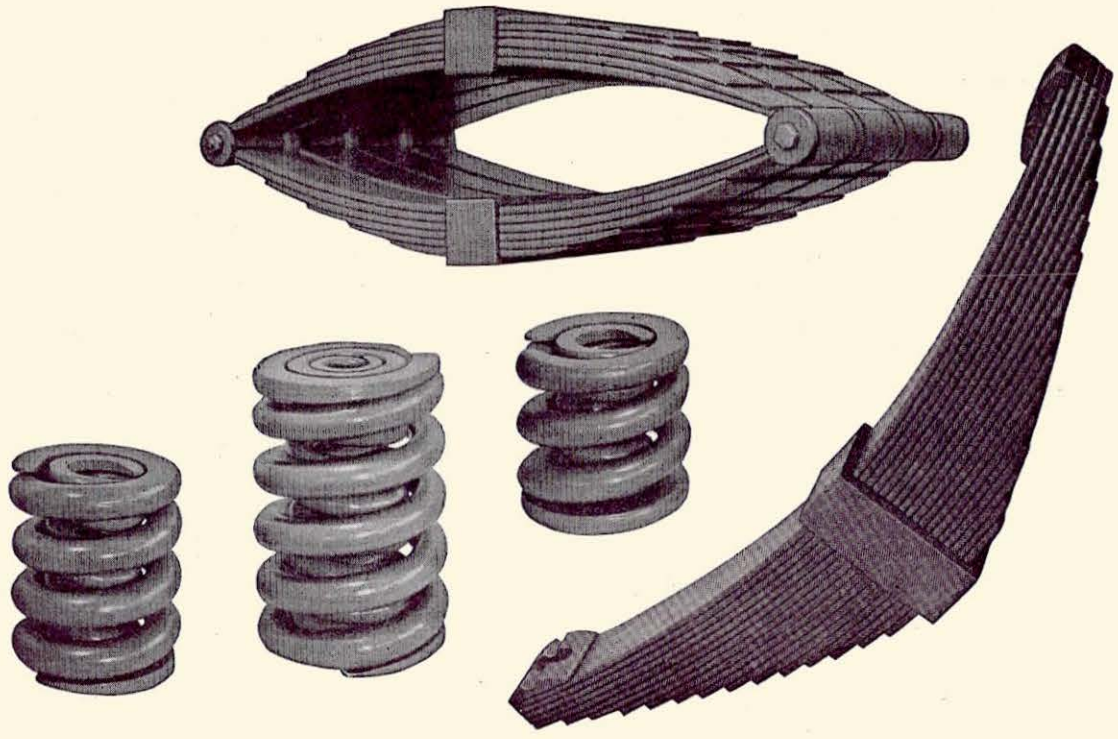
Eliminates cinder wear on smokebox sheets, rivets, doors and door rings.



LOCOMOTIVE FIREBOX COMPANY

NEW YORK CHICAGO MONTREAL

Quality Springs



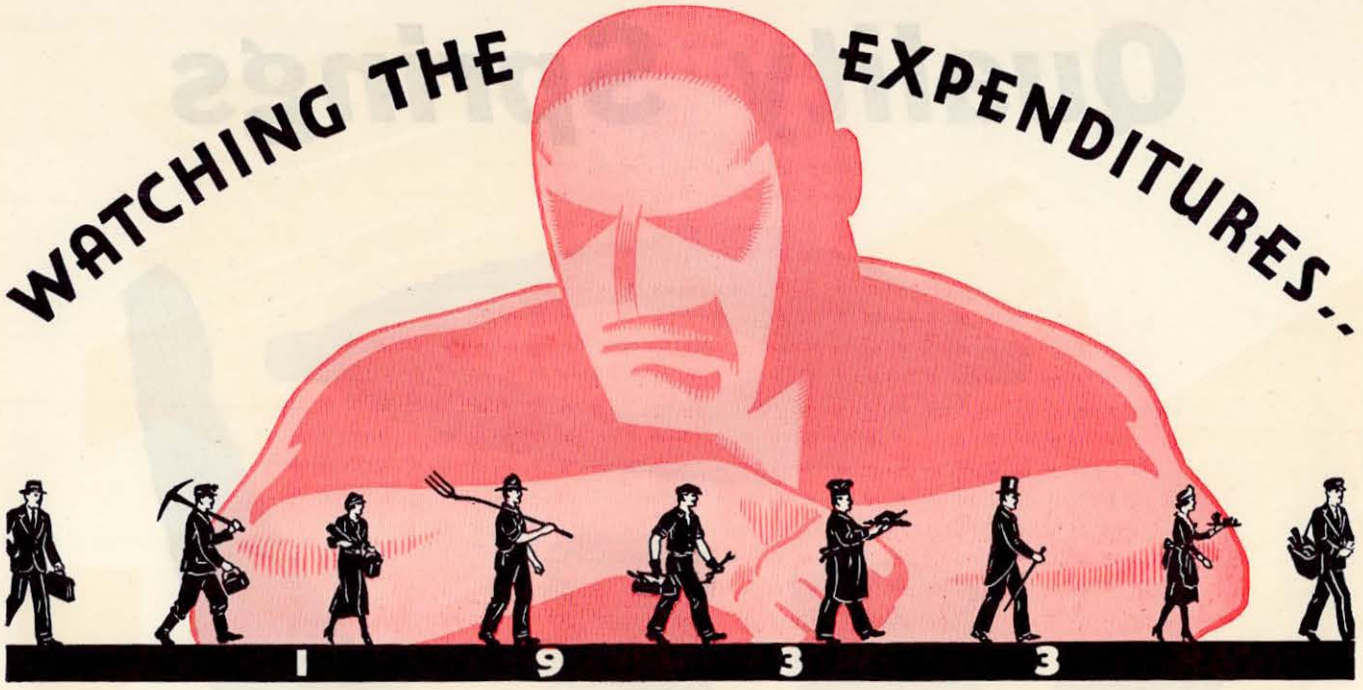
During a third of a century the American Steel Foundries has built up a reputation for the designing and manufacturing of springs for railway equipment and industrial purposes. Its plant is equipped with complete modern facilities for double heat treatment of springs to meet the new standard specifications.

Old springs returned for repairs are reconditioned and given the same heat treatment as required by the specifications for new springs. Many railroads are finding it desirable and more economical to have old springs rebuilt in a plant with such facilities than to attempt the work in their own shops.

So important and essential is the dependable operation of springs for all purposes that the selection of a satisfactory source of supply deserves real thought and study.

AMERICAN STEEL FOUNDRIES

NEW YORK CHICAGO ST. LOUIS



OF THE PEOPLES' DOLLARS

Time, that Tough Old Tester of the works of man, will be watching the expenditures of every dollar of the vast sum appropriated by Congress to help get the wheels of industry off dead center and busily turning once more.

As each dollar is spent, as each building is erected, as each project takes form, Time, with all the industrious destroyers at his command, will begin to wear out those buildings, will begin to tear down those projects. Rain and snow, wind and wear, heat and cold will immediately test the values of materials for which the public money has been spent.

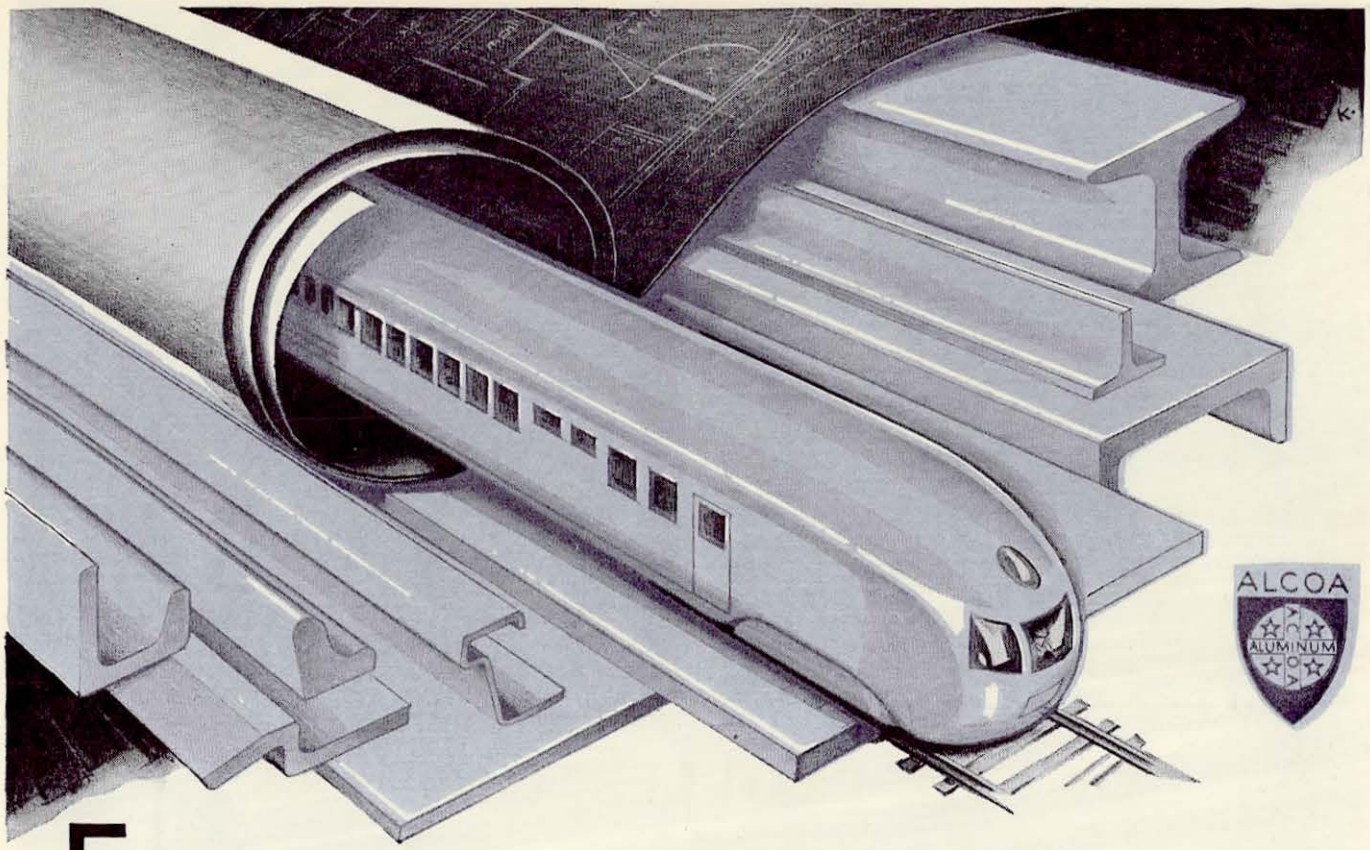
It is the obligation of everyone engaged in expending these dollars to make sure that the public will benefit from the highest values obtainable. In pipe, it means that in those places where only Reading Genuine Puddled Wrought Iron Pipe can serve best, it should be used. It also means that where some other kind of pipe will prove most serviceable and economical down the years, that other kind of pipe should be installed.

It is the pledge of the Reading Iron Company that it will only recommend the use of Reading Genuine Puddled Wrought Iron Pipe for those services where Genuine Puddled Wrought Iron Pipe has proved its greater value by performance lasting long after the initial cost has been written off. Wherever other pipe, either costlier or cheaper, will serve better, it will recommend its use.

READING GENUINE PUDDLED WROUGHT IRON
SINCE 1848

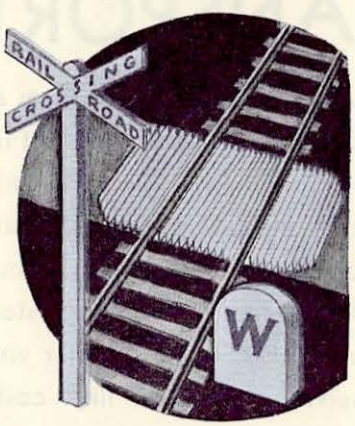
READING IRON COMPANY PHILADELPHIA

SCIENCE & INVENTION HAVE NEVER FOUND A SATISFACTORY SUBSTITUTE FOR GENUINE PUDDLED WROUGHT IRON



For that new, swifter "Model Train"

Alcoa Aluminum in any form you want it



On the right of way, for signal posts, fences, grade crossings, towers, aluminum paint made with Alcoa Albron Powder, protects surfaces against rust, weathering, smoke fumes. Lowers maintenance costs in general, brightens shop interiors.

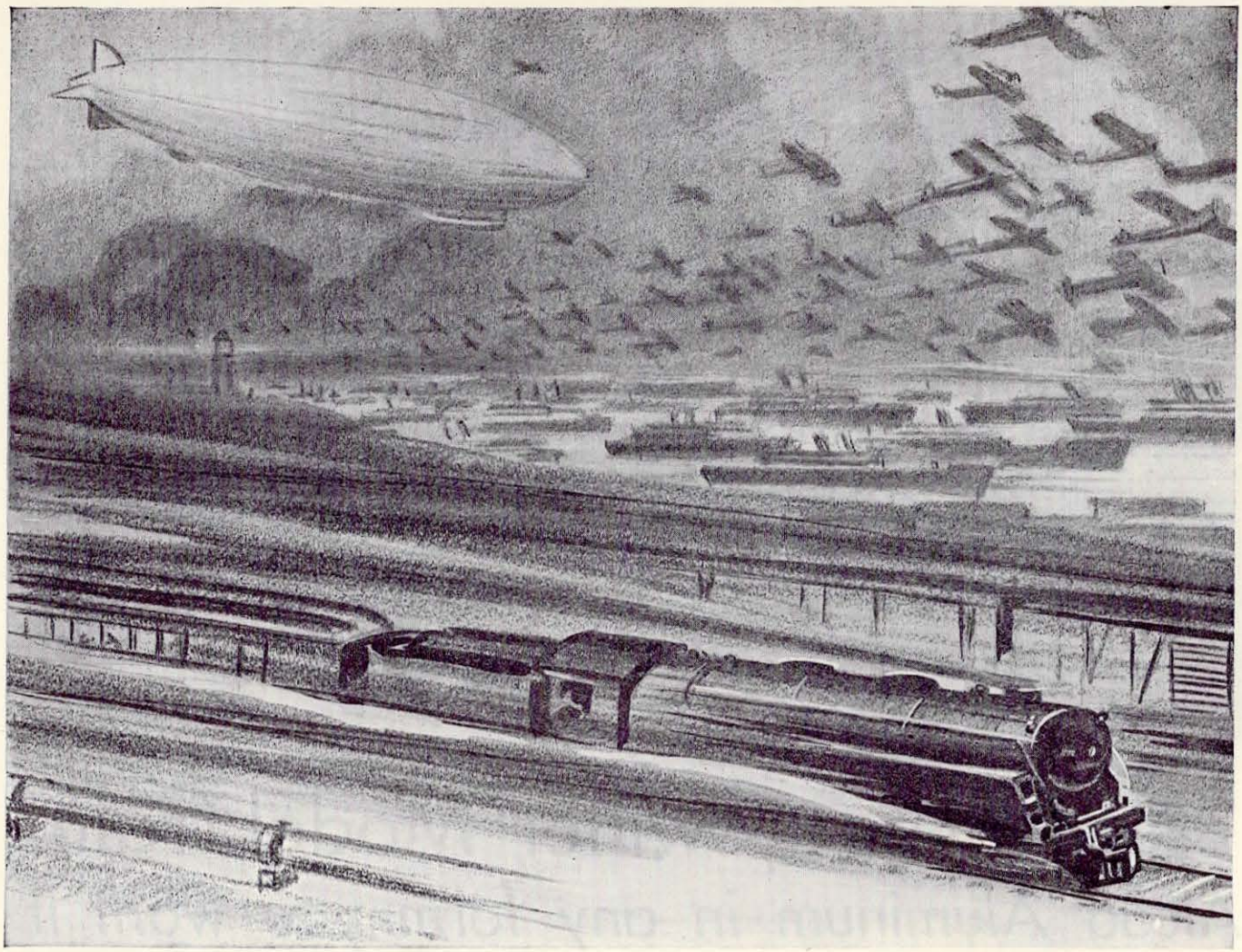
Forget the old restrictions in car design. Streamline your "model train" for speed, safety, efficiency, attractiveness. The light, strong alloys of ALCOA Aluminum come in forms that will fit in perfectly.

Sheets, plates, structural and extruded shapes can be furnished in commercial lengths up to 90 feet and in widths satisfactory for car building. Plates up to 2 inches thick and bar stock up to 6 inches by 10 inches in cross section are available for truck parts, brake-levers, etc. Extruded shapes permit rigid interlocking designs otherwise impossible, with fewer joints and rivets. And all the other light, but strong shapes—forgings, castings for trucks and frame parts, bolts, nuts, tubing and conduit, electrical conductors.

Wherever you find new and better rolling stock being built, you'll probably find ALCOA Aluminum written into the specifications. These alloys, strong as structural steel, yet only 1/3 as heavy, are easier and more economical to work with. They eliminate the railroad's great burden of dead weight, step-up speed, save power, reduce hammer on the rail joints. They actually *increase* the safety factor, by allowing structural parts to be thicker, sturdier—yet lighter in weight. They can help *your* road win and hold passenger traffic by providing the safe, swift transportation that today's public demands.

Our Engineering Service is prepared to cooperate with your engineers to obtain the most efficient, economical and safe use of this modern metal. Let us show you the possibilities of redesigning with ALCOA Aluminum. Just address ALUMINUM COMPANY *of* AMERICA; 1878 Gulf Bldg., PITTSBURGH, PENNSYLVANIA.

ALCOA ALUMINUM



NEW AVENUES OF TRANSPORT

AMONG all new avenues of transport the oldest of them all will remain as the most essential trunk lines — the most indispensable and efficient arteries of mass transportation the world has ever known. And Standard Steel Works Company which antedates the railroads themselves will continue its indispensable function of making and supplying high duty locomotive forgings, steel wheels, tires, axles, springs, pins, rods, castings and other vital parts which give railroads longer service and lower final costs.

STANDARD STEEL WORKS COMPANY

SUBSIDIARY OF THE BALDWIN LOCOMOTIVE WORKS

General Offices and Works: BURNHAM, PENNA.

Chicago Philadelphia Akron Portland

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AMERICAN Fence and BANNER STEEL POSTS

What About The Right-Of-Way?

Millions are spent protecting life and property at crossings, but what about the Right-of-Way?

The best way to reduce stock claims is to enclose the Right-of-Way. The most economical protection is offered by American Railroad Fence and Banner Steel Line Posts. These products, including National Expanding Anchor End and Corner Posts, meet all specifications of the American Railway Engineering Association. Write for a personal consideration of your problems.

1831 MORE THAN 100 YEARS OF PROGRESS IN WIRE MAKING 1933

AMERICAN STEEL & WIRE COMPANY

208 South La Salle Street, Chicago
94 Grove Street, Worcester

SUBSIDIARY OF UNITED STATES STEEL CORPORATION
AND ALL PRINCIPAL CITIES

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NEW FEATHER-TOUCH*

DEVILBISS
TYPE MB
SPRAY GUN
DEVILBISS
Operators who have used this new spray gun say it is the easiest and smoothest gun to operate of any they have ever handled.

SENSATIONAL NEW GUN MAKES SPRAYING EASIER, FASTER, MORE ECONOMICAL

Progressive railway paint departments will give instant approval to the new DeVilbiss MB Spray Gun with Feather-Touch Control... It's new—advanced; a gun that makes spray-painting far more efficient, far more economical—and produces better results.

While this new gun offers many revolutionary improvements, it retains the many basic, exclusive DeVilbiss features which have long proved so thoroughly successful. New ease of operation, new efficiency and economy are achieved without any sacrifice of durability or simplicity of design.

Your local DeVilbiss representative will be glad to give you full details of the new Type MB Spray Gun. Or write us direct.

THE DEVILBISS COMPANY, TOLEDO, O.
New York Philadelphia Cleveland Detroit
Chicago St. Louis San Francisco
Windsor, Ontario

Direct sales and service representatives available everywhere

* FEATHER-TOUCH CONTROL ADVANTAGES

Just a light touch on the trigger, and air pressure automatically releases needle spring tension, eases trigger operation, relieves operator of all finger, wrist or forearm strain. Shorter trigger travel; no stretching for trigger.

New perfect balance and scientific design of handle and trigger make gun fit the hand easily, comfortably, naturally.

Newly designed air passages; more air in head—better atomization at 10% to 15% lower pressure.

Clean-cut lines; highly polished surface; no irregular surface cavities to hold dirt; easy to clean.

RESULTS

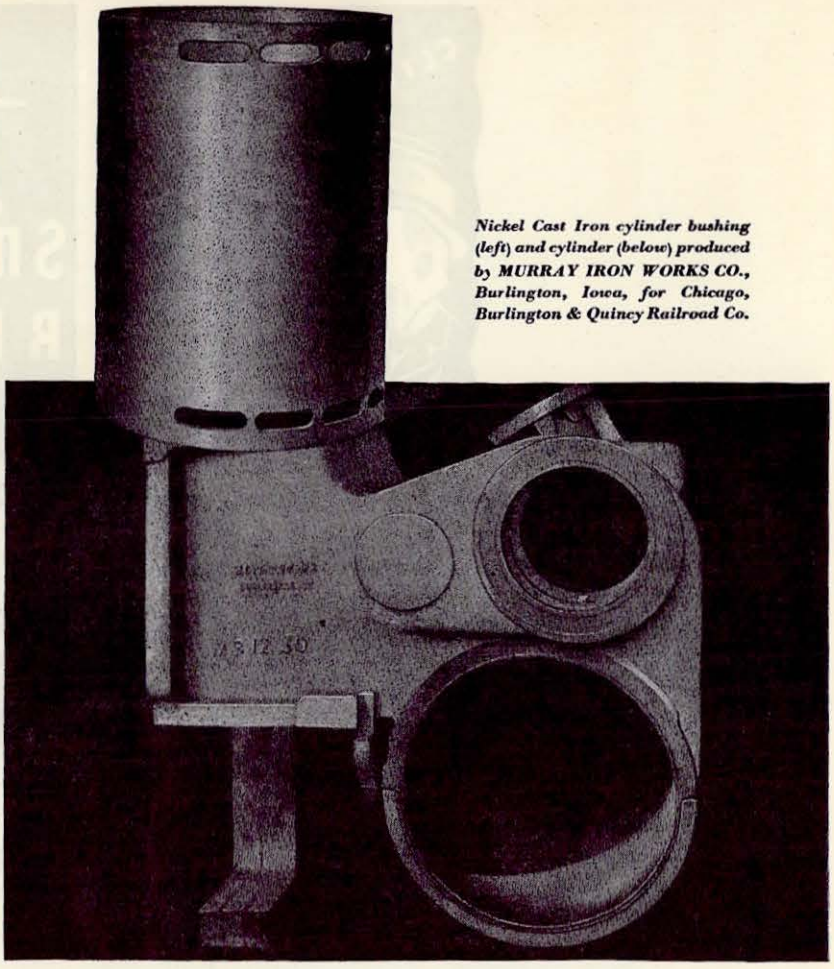
Smoother, more even painting—higher quality work; material applied at lower pressure, with better atomization.

Faster, easier operation—more air brought to gun nozzle, more material applied per minute.

More flexible than any other gun—easy adjustments make it adaptable to very delicate work, or to large industrial jobs.

All these new advantages at no increase in cost. Gun fits equipment now in use.

DeVilbiss

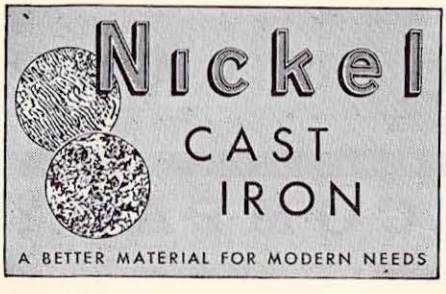


Nickel Cast Iron cylinder bushing (left) and cylinder (below) produced by MURRAY IRON WORKS CO., Burlington, Iowa, for Chicago, Burlington & Quincy Railroad Co.

Class 1-A *castings* of Nickel Alloy Iron in C. B. & Q. *specifications:*

- Air pump bushings
- Air pump cylinders (steam and air end)
- Air pump pistons
- Air pump valves
- Crosshead gibs*
- Crosshead guides and blocks*
- Crosshead shoes*
- Cylinder bushings
- Cylinder packing rings
- Passenger motor car cylinder heads
- Passenger motor car cylinder sleeves
- Passenger motor car elbow exhaust manifold to cylinder
- Piston bull rings
- Piston followers
- Piston heads
- Piston valve bull rings
- Piston valve chamber bushings
- Piston valve followers
- Piston valve packing rings
- All valve chamber bushings*
- Slide valve bodies
- Slide valve false seats
- Slide valve strips
- Side rod bushings*

** When made of cast iron*



Specifications for C. B. & Q. *Class* 1-A *castings read* "SHALL CONTAIN NICKEL"

NICKEL and chromium have been written into the specifications for class 1-A castings by the Chicago, Burlington and Quincy Railroad in order to obtain the following essential properties: Transverse strength...3,800 lbs.; deflection...0.110 ins.; Brinell...196 (min.) — 235 (max.)

Superheat practice in locomotives has introduced higher stresses and lubrication problems. The new conditions demand stronger and longer wearing cast iron for vital parts. These requirements are adequately met by the Nickel chromium iron castings listed at the left.

Nickel Cast Iron performs better longer in these improved railway parts just as it does in other important leading industrial fields. The result is an ever-growing recognition of the superiority of this scientifically correct material — Nickel Cast Iron.

THE INTERNATIONAL NICKEL COMPANY, INC.

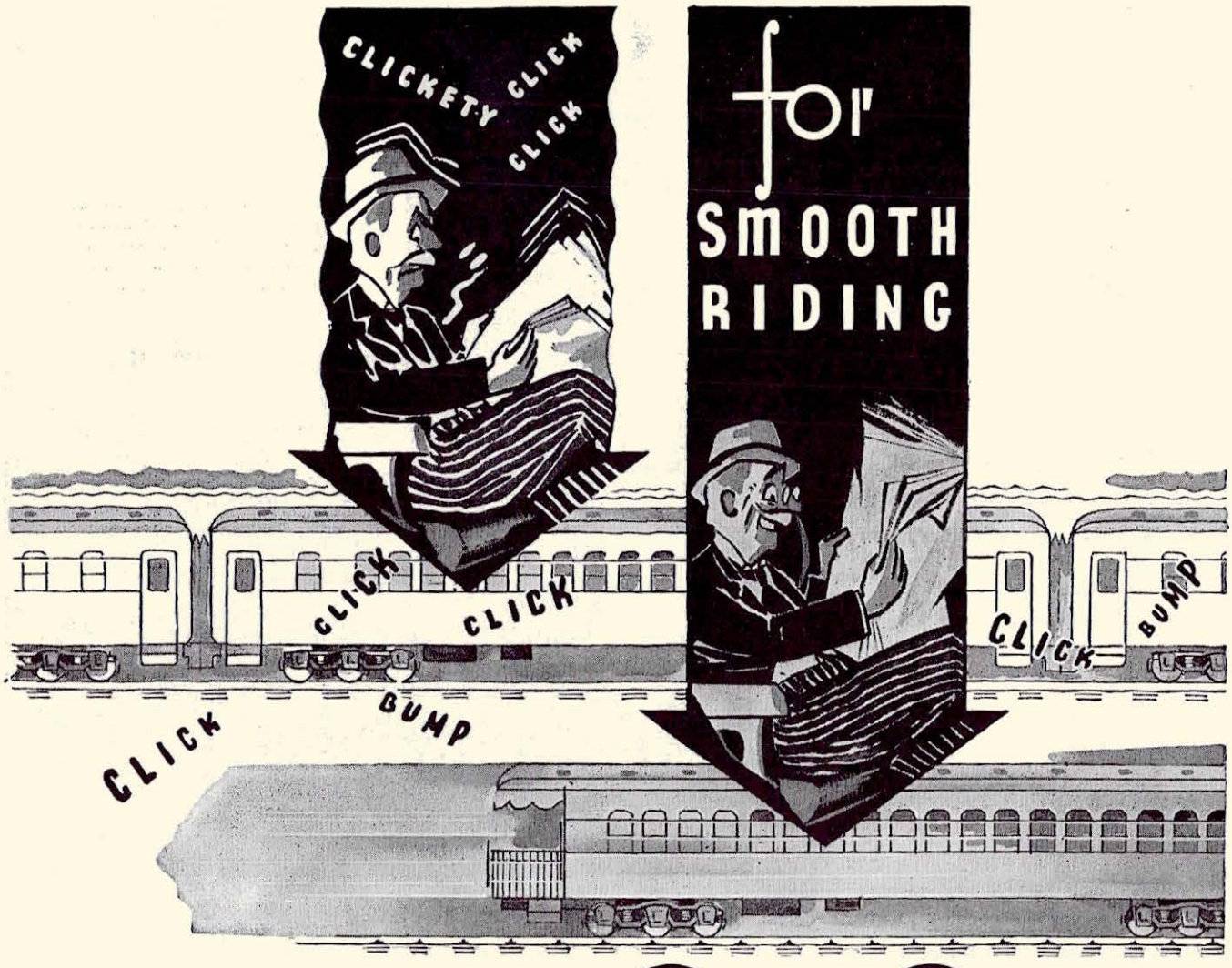
Miners, refiners and rollers of Nickel... Sole producers of Monel Metal

67 Wall Street, New York, N. Y.

NRA MEMBER U.S. WE DO OUR PART

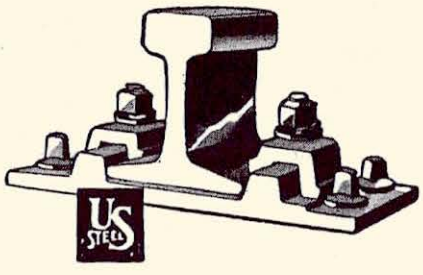
Our casting Specialists will gladly discuss your problems with you

INCO NICKEL



GEO

TRACK CONSTRUCTION



Smoothes out your track as well as the disposition of your passengers. Smooth, safe transportation is your best sales argument—an unanswerable challenge to competition. • GEO switches and turnouts, now manufactured by The Lorain Steel Company, place at your command your complete track requirements in this modern construction. Carnegie and Lorain representatives are anxious to discuss your track problems with you. • When you are in Chicago, inspect the GEO installation at "A Century of Progress" among the track exhibits outside of the Travel and Transportation Building.

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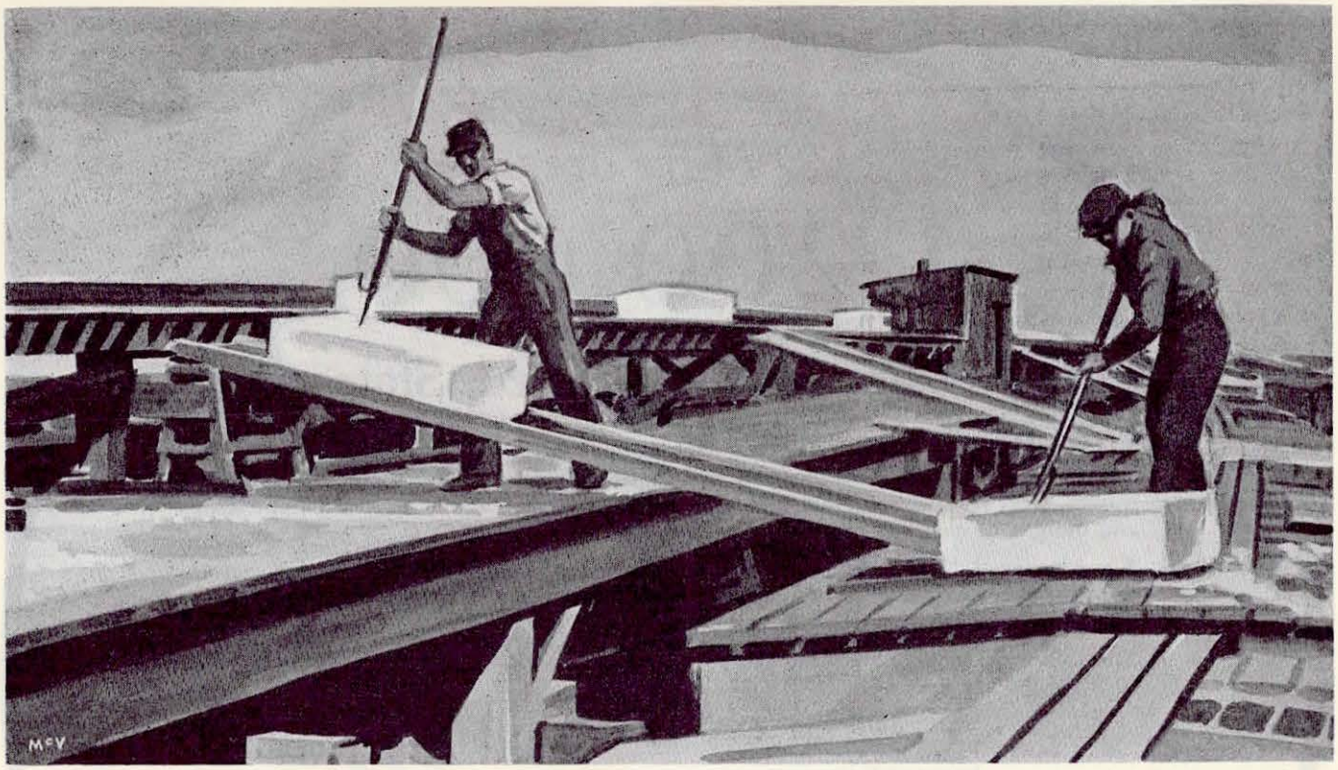
CARNEGIE STEEL COMPANY
PITTSBURGH • PA

Subsidiaries of United States Steel Corporation

THE LORAIN STEEL COMPANY
JOHNSTOWN • PA



How long will it last?

When the last ice cake is off the loading platform and in the bunker, how long is the load of perishables protected from outside heat? How long before the "hot spot" develops in the center top layer?

If the car is properly insulated with the products listed below, you always can depend on low and even temperatures, the maximum of protection and minimum spoilage claims. For these products have a dependability and margin of safety that provides for reasonable hold-overs. Even after many years of service they continue to give maximum protection to the load, for well installed, these materials maintain uniquely their initial efficiency and life. They are designed and manufactured with permanence in view.

A well designed car insulated with Dry-Zero and Hairinsul or Ozite Blanket will greatly reduce repairs and maintenance by lengthening efficient life.

Railroad men take this efficiency for granted. About 87% of all the refrigerator cars on American and Canadian railroads are insulated with these products. And the experience gained over many years of this kind of service plus the intensive research conducted in the Dry-Zero laboratory—probably the best equipped thermal testing laboratory in the country—are at the disposal of any railroad official, without obligation.

Hairinsul √ Dry-Zero √ Salamander Passenger Car Insulation
Carinsul Passenger Car Insulation √ Ozite Standard Hair Felt

AMERICAN HAIR & FELT COMPANY—DRY-ZERO CORPORATION
Railroad Division

Merchandise Mart **Chicago**

There are

1,200,000

House Cars in the United States and Canada . . . .

Some are 36 ft., 38 ft., 40 ft., 45 ft., and 50 ft. in length. They vary in width from 9 feet to clearance limits. Some have wood frames, steel frames, some are all-steel. In all, there are about 1,000 different sizes and designs of cars.

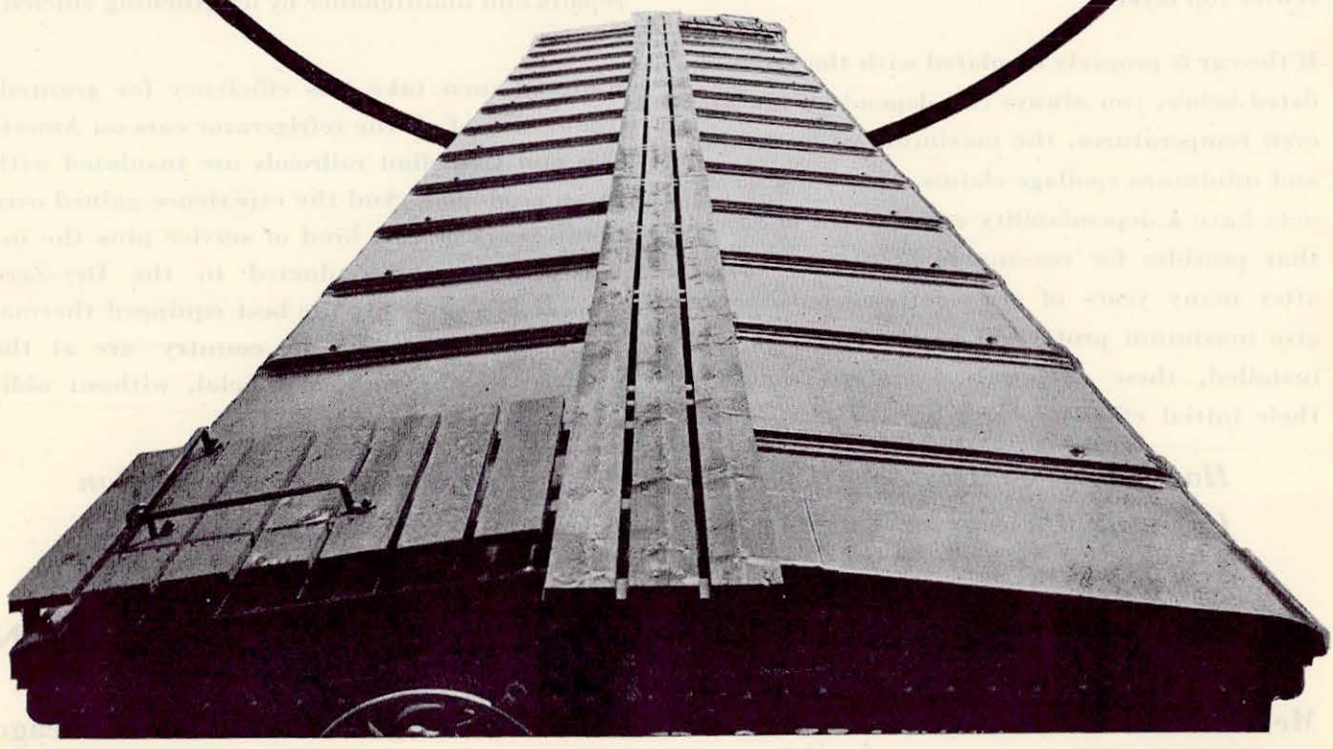
The Universal Dry Lading Roof, consisting of only 9 one-size, one-design parts, can roof every one of these 1,200,000 cars. The longer cars simply require more of the same size parts than the short cars.

The following table shows how many of each of the 9 parts are required for 36 ft., 40 ft., and 50 ft. cars.

Length of Cars	36′	40′	50′
Intermediate sheets	22	24	30
End sheets	4	4	4
Intermediate transverse caps	24	26	32
End transverse caps	4	4	4
Intermediate ridge caps	11	12	15
End ridge caps	2	2	2
Eave flashings	12	14	18
Running board saddles	12	13	16
End center caps	2	2	2

Railroads would save millions of dollars annually if all the 1,200,000 cars were roofed with the

UNIVERSAL DRY LADING ROOF



Hutchins Car Roofing Company

Some Comment on Current Problems

"All the politicians in the world could not have prevented the decline in business that began in 1929, and all the politicians in the world cannot prevent continuance of the improvement which is now under way." The foregoing statement, which was made in private conversation last week by one of the largest manufacturers in the United States to the president of one of the largest railroads, is, while somewhat exaggerated, the best summary in a single sentence of the effects of past and prospective changes in government policies, in world-wide psychology and in economic conditions that we have read or heard. Politicians and government activities can hurt or help business, but only under a socialist or communist state, where they entirely run business, do they long determine its trend. In most of the countries of the world the system of private ownership and management of property, otherwise known as "capitalism," still prevails. In those countries business is made bad or good principally by the way in which business is managed and the people work, and reports show that in almost all such countries business is getting better.

Railway Car Loadings and Earnings

As noted in an editorial in the *Railway Age* last week, the trend of business in the United States was upward in April, May, June and July, and apparently downward in August. The report of car loadings in the week ended September 2 indicates that the upward trend has been renewed, although later information will be required to confirm this view. The best measure of the trend is comparison of average car loadings in the five years 1925-1929 with current loadings. In July loadings were 38.4 per cent less than the five-year average for that month, and in August 41.9 per cent less. In the week ended August 26 they were 42.9 per cent less, and in the week ended September 2 only 41.2 per cent less, than the five-year average, and amounted to 666,652 carloads, the largest weekly loadings reported since November, 1931, and 19.1 per cent greater than in the corresponding week of 1932.

The net operating income earned by the Class I railways in July was $64,310,000, and was less than had been predicted in the *Railway Age* on the basis of the increases that occurred in May and June. It was, however, the largest amount earned in any month since October, 1930, and was made smaller than it otherwise would have been by an increase in operating expenses from $181,584,000 in May and $185,325,000 in June, to $194,912,000 in July. The greater increase in operating expenses in July than in June was due to a relatively much larger increase in the expenditures of the railways for labor and materials and supplies. In June, as compared with May, the increase in their operating expenses was only 16.2 per cent of the increase in their gross earnings, while in July, as compared with June, the increase in their operating expenses was 62 per cent of the increase in their gross earnings. The principal reason why the increase in their gross earnings in June was greater than in July was that, in addition to the increase in their freight earnings, their passenger earnings in June were about $7,000,000 greater than in May, principally owing to the fact that June was the first month of travel to the Century of Progress Exposition in Chicago, whereas there was no corresponding increase in travel in July as compared with June.

"What Shall We Buy?"

An increase in railway employment and buying has begun and will continue at an accelerating rate if traffic and earnings continue to increase, but railway officers are confronted with a question which, in the magnitude of its importance, is new, and that is the question, "What shall we buy?" Of course, a vast amount of buying of equipment and materials, such as have been bought in the past must be done to make up deferred maintenance, but the railways are confronted with many new economic and competitive conditions, and in every railway organization there is questioning as to the extent of the changes, and as to what kind of changes, must be made in facilities and service to meet these new conditions.

To what extent shall the railways buy buses and trucks to supplement or replace present passenger and freight service? Shall lighter cars and new kinds of power be acquired for passenger service? Shall more self-propelled cars be acquired to furnish cheaper and

more frequent passenger service? Shall bulky freight continue to be hauled in long, heavy trains, and freight that is more subject to highway competition be hauled in faster trains equipped with lighter and smaller cars? Can truck competition be best met by store-door collection and delivery in connection with freight trains of the present kind, or by rail-truck service utilizing containers, or, perhaps, even by trucks equipped with two kinds of wheels that will enable them to operate on both rails and highways?

Opportunity for Initiative

These are but a few of the questions that railway officers, executive, technical, purchasing and traffic, are confronted with. Many of them believe the railways now have more obsolete facilities than ever before, both because of the small amounts of capital expenditures that have been made during the depression, and because of the great economic changes that have occurred so fast within recent years.

The problems presented are unprecedentedly numerous and difficult, but they present an unprecedented opportunity to the initiative and inventive genius of both railway officers and manufacturers. Much of this initiative and inventive genius already have been shown, and much more of them will be shown. The railways have not been more rapidly adapted to present conditions, first, because changes have come too fast for human foresight, and, secondly, because the depression arrived just when the need for radical changes in railway facilities and service became obvious and deprived the railways of the earnings and credit essential to raising the money with which to make needed changes. If earnings and credit continue to improve we shall probably see a remarkable renaissance in railway transportation during the next decade.

Railway Accidents and Other Accidents

A few days ago a collision of two trains on a large railroad, resulting in the deaths of fourteen persons, made "first-page stuff" in many of the country's newspapers. Especially emphasized in the news and comment regarding this accident has been the fact that it involved the telescoping of a wooden coach by a steel sleeping car. It is unfortunate in every way that the accident record made by the railways should thus be occasionally marred, but it remains a fact that the rail ways of the United States during the last decade have made, and are still making, a record of safety in furnishing transportation that is unsurpassed, and perhaps unequalled, by that of any other means of transportation in the world, and through their advertising and publicity they should emphasize the superior safety of transportation by rail much more than they do.

Probably there is no other place whatever in which any American man, woman or child is safer than on a railroad passenger train. Formerly marine transportation was safer than rail transportation, and many assume that this is still true, but it is not. The report of the Supervising Inspector General shows that in 1932 the number of marine passengers carried for each fatality was 4,775,276, while the railroads carried 17,097,802 passengers for each one killed. The most striking of all contrasts in safety is presented by the records of highway and railway transportation in the United States. In 1932 our railways carried 606,233,309 passengers one mile for each one killed, while in 1930—the latest year for which the record is available—motor vehicles, according to Lou R. Palmer, Conservation Engineer of the Equitable Life Assurance Society, carried only 20,825,000 passengers one mile for each one killed. In other words, the safety record of the railways in 1932 was about thirty times as good as that of motor vehicles in 1930, or, to state the matter otherwise, the safety record of motor vehicles is only 3⅓ per cent as good as that of the railways. The number of passengers killed on the railways in 1932 was 28, while the number of persons killed in motor vehicle accidents in 1931 was 32,500. On the average 90 persons were killed in motor vehicle accidents on the highways every day, while only one railway passenger was killed in every thirteen days.

"If a Man Bit a Dog"—

Charles A. Dana said that if a dog bit a man it was not news, but if a man bit a dog it was news. Upon the same principle the killing of ten persons in a single railway accident was news, because such accidents have become so rare, while the fact that, if the average was maintained, 90 persons were killed in highway accidents on the same day was not news because unsafety and accidents upon the highway are common and universal. In England the law makes it impossible for any person who has bought an automobile to get a license to use it until he can show that he has taken out insurance providing for full compensation to property and persons that may be damaged or killed by it. In the United States if there is a fatal railway accident, and especially one involving a wooden coach, it is given widespread publicity and condemnatory comment, while anybody in this country can buy a used automobile the brakes of which may be as deficient as the brains of the average driver, and begin using it in the most congested traffic without any assurance that he is capable of driving or any insurance to protect property or persons. The willingness that the American people show to kill themselves and their neighbors in automobile accidents presents a singular contrast to their determination to compel the railways to spend large amounts to increase the safety of the safest existing means of transportation.

Probably the most important duty given to the federal co-ordinator of transportation by the Emergency Railroad Transportation Act, 1933, is that of studying the entire transportation situation and recommending legislation to Congress for its improvement. Co-ordinator Eastman has created a staff of able men to help him in this work, and fortunately the co-ordinator and his staff approach the problem from the standpoint of the public as a whole, and not from the standpoint of any particular means of transportation, or any individual railroad. The public interest is para-

mount, but it is difficult for those identified with any particular class of carriers or transportation company to subordinate, even in their thinking, their own interest to that of the public, and, therefore, a thorough study of the problem from the standpoint of the public interest, and recommendations for legislation based upon the results of that study, are highly desirable.

Public sentiment regarding the transportation problem will not, however, lie dormant while the co-ordinator and his staff are making their study, nor will legislation necessarily be determined by their recommendations. The people and their representatives in Congress already have views of their own regarding the transportation problem which are likely to change more or less before Congress meets, and the public sentiment that prevails then probably will exert as much influence on the legislation enacted as the facts presented and the recommendations made by the co-ordinator and his staff.

It, therefore, behooves the managements of the railways to begin immediately to recast the program announced by them about a year ago, and to adopt the means necessary to presenting to the public the federal and state legislation they believe should be adopted and the arguments in support of it. Some parts of the program announced by the railways last year, such as the repeal of the recapture provisions, already have been adopted. Some of the most important parts of it, including those dealing with subsidization and regulation of their competitors, and with the virtual prohibition of competition by the railways with steamships operating through the Panama canal, still require energetic promotion by every legitimate means.

Meeting Competition, Including Propaganda

The competitors of the railways by highway and water were never more active in carrying on propaganda in their own interest than they are now, and are spending a great deal more money for publicity and advertising than the railways are. While the activities and expenditures of the railways are subject to government supervision, those of their competitors are not, but doubtless government officials who have supervision over the railways understand the situation, and realize that it is the right and duty of railway managements to meet competition, not only in making rates and rendering service, but also in presenting evidence and arguments regarding the transportation problem to the public.

Fortunately, railway employees know, as they never did before, that unfair competition with the railways is unfair competition with the employees of the railways, and have state and national organizations under capable leadership that will give powerful backing to any reasonable demands made for a "new deal" in transportation. Incidentally, it may be worth while to call attention to the fact that the most potent opposition offered to legislation that will put the railways and other carriers on a fair basis of competition comes from manufacturers of motor vehicles and gasoline and that if it is to their selfish interest to fight the railways as they are doing, it is equally to the interest of manufacturers of railway equipment and supplies and of coal mine operators to fight for the railways.

The future of the railways, of all railroad men, both employed and unemployed, and of industries dependent upon them for a market, may be largely determined by developments within the next six months.

A Railroad Day at the Fair?

A suggestion that there be a "railroad week" at the Century of Progress Exposition in Chicago having been rejected, another proposal for a "railroad day" has been made. There is need for doing everything practicable to make the American people more "railroad-minded." The nation is confronted with a transportation problem which if not so solved as to redound to the advantage of the railroads will be so dealt with as to be inimical to the economic welfare of the public. The railroads are still the most essential means of transportation and unless government policies are adopted which will make competition more fair between them and other carriers and unless railroad service is so sold as to increase shipping and traveling by rail it will become impossible for the railroads to render satisfactorily the vast amount of essential service that the public welfare requires. A "railroad day" at the Fair would afford one good opportunity for helping to publicize the railroad problem and railroad service. Nothing could better show that the public can still be attracted to passenger trains and that it can still be interested in improvements in railroad equipment than the large amount of travel by rail that there has been to the Fair and the throngs who have passed through the railroad exhibits.

Seek Federal Dictation of State Highway Policies

The "highwaymen" are trying by every possible means to foist upon all the states with reasonable restrictions on motor vehicle sizes and weights the preposterously high limitations advocated by the Chief of the Bureau of Public Roads, for which approval of the American Association of State Highway Officials has been secured. The latest attempt in this direction is an appeal by the Federated Motor Truck Associations to the Secretary of Agriculture, asking him to urge the President to call upon the governors and the legislatures of Texas, Louisiana, Kentucky and Tennessee to repeal as far as federal aid roads are concerned their statutes limiting the loads of vehicles on their highways.

Who should determine the limitations upon the weights and sizes of motor vehicles? The highway officials, of course, are entitled to a voice in the matter, but can the final decision in all cases safely be left

with them? The question is greater than one of construction standards alone. It involves policies of taxation and the assignment of a proper share of road costs to the vehicles of varying weights. If it should appear that operators of vehicles of more than a given weight and size could not afford to pay the share of road costs thus allocated to them, then that fact should result in closing the roads to such vehicles with a resulting saving in construction and maintenance costs which should be passed along to the taxpayers and to other users of the roads. Decisions on such important matters of policy cannot safely be left to one interested group alone. The taxing authorities certainly should be consulted, and every party at interest should be given a hearing. Finally, since the question is one in which selfish interests of particular groups enter so largely, intelligent students of finance and taxation concerning the disinterestedness of whom there could be no question should have a prominent part in the discussion.

It would appear on the face of it that the density of population and the volume of traffic in some states would permit trucks of a given size and weight to be self-supporting as regards highway costs, whereas, in states of thinner traffic, vehicles would have to be much smaller if levies making them self-supporting as to road costs would be kept from rising to prohibitory levels. If the foregoing assumption be true, then it would be impossible in fairness to the states to expect them to adopt uniform weight and dimension limitations.

Yet the "highwaymen" are demanding just that. There is a clause now in the federal aid highway act which prohibits the levying of tolls on roads constructed in part with federal moneys—a clause which has undoubtedly cut off a much needed and entirely justifiable source of revenue to the states during the present crisis. The clamor for the removal of weight and size restrictions on federal aid roads indicates a plain intent to invade further the field of states rights, with federal aid used as a weapon. It is time that owners of real estate and farm lands should awaken to this effort to increase the already heavy expenditures they are being required to make for the purpose of extending heavy-duty highway transport beyond its legitimate economic field.

The Growing Interest in Lighter Cars

Since the announcement of recent orders for light-weight high-speed trains, particularly those of the Union Pacific and the Chicago, Burlington & Quincy, the rapidly increasing interest of the general public, as well as railway officers, in this type of equipment is apparent. Columns have been written about these trains in the daily press throughout the country; more or less extensive articles have appeared in technical publications; and the economic advantages and limitations of light-weight equipment are a common topic for discussion and study in railway offices. Unlike certain fads, however, which appeal to the popular fancy, enjoy a mushroom-like growth, and are discarded as quickly, there can be little question that lighter railway equipment will be developed in this country along conservative and permanently useful lines, and that it will become, to an increasing extent, a factor in rail-transportation economy.

New light-weight materials and improved standard materials, as well as the technique of using them, are available to experienced car designers who are now developing equipment best adapted to meet modern requirements, namely, maximum economy in operation consistent with higher speeds, and without the sacrifice of safety, which is pre-eminently the first objective in railroading.

Among the materials which hold considerable promise for successful use in light-weight car designs, already completed or well underway, are strong aluminum alloys, heat-treated steel, stainless alloy steels, etc., which give superior physical properties at greatly reduced unit weight. The use of all-welded construction in connection with standard structural steel shapes and plates also makes possible substantial weight savings without the sacrifice of strength. The comparatively recent successful development and use of extruded metal shapes permits still further reductions in weight and important savings in fabricating cost. Notable improvements in the making of steel castings, particularly in the physical characteristics of the material and in the use of thinner sections than would have been considered practical only a few years ago, make this material a factor to be considered in designing lighter cars.

One of the great advantages of lighter equipment is the possibility which it affords of obtaining higher speeds with the same power or the same speeds with less power than now required. In passenger service the question of whether the investment in lighter equipment is justified will depend upon how effective the improved schedules and possibly reduced rates as a result of lower cost are in drawing increased passenger traffic. The possible reduction in operating cost is also of primary importance in any consideration of light-weight equipment for freight-train service. One of the most interesting recent studies of this subject was presented by A. F. Stuebing in an article in the *Railway Age* of September 2, in which a total annual saving of $17.97 per ton of weight reduction per car was estimated to be obtainable under average operating conditions. This conservative estimate, based on average conditions, will probably be substantially increased in many railway studies of service conditions where the use of light-weight equipment is particularly advantageous or desirable.

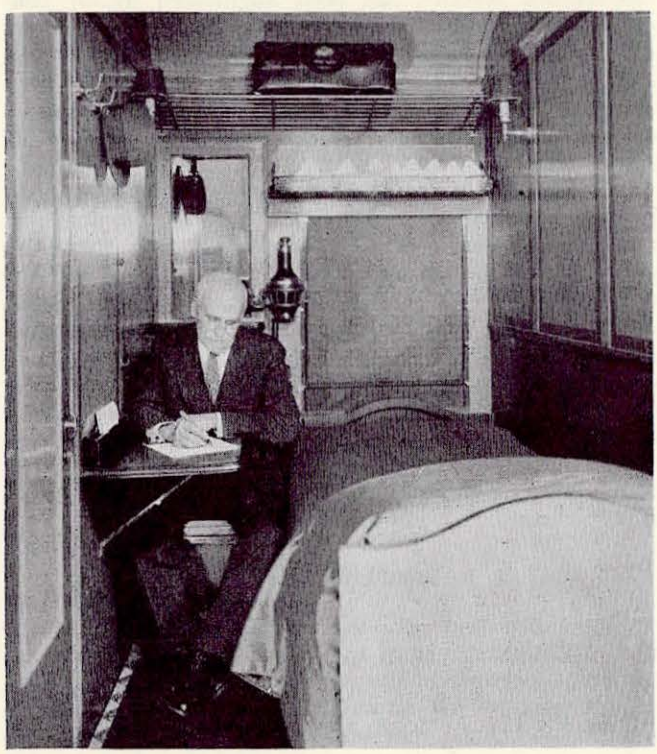
Are the Railways Capitalizing on Pullman Service?

Are they making the most of the fact that they alone can offer patrons a night's rest while traveling?

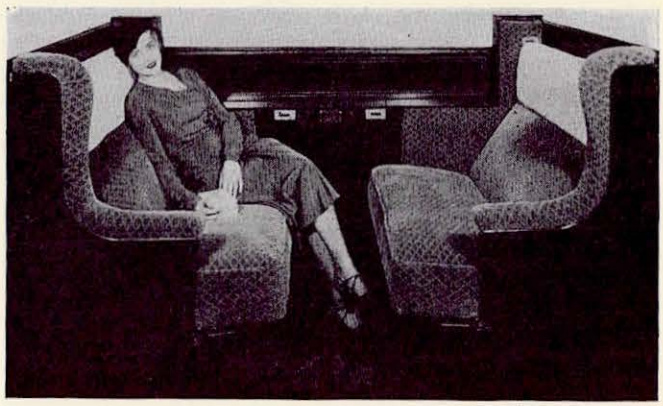
ARE the railways merchandising their Pullman accommodations adequately? Can they further emphasize the advantages of sleeping car facilities in such a way as to increase travel by train? Pullman service has become so intimate a part of railway service that its importance in regaining and holding passenger traffic may be underestimated. As the value of a night of sleep is hard to estimate until the morning after a sleepless night, so is the value of Pullman service in merchandising railway transportation difficult to appreciate without a careful study.

The railways are the only land agency of transportation that offers comfortable sleeping accommodations to passengers while traveling. To eliminate sleeping cars would mean to revert to the age when our forefathers journeyed after dark only at such times as necessity spurred.

Without Pullman sleeping accommodations, at least one-third of the persons who occupy sleeping cars each year would lose a traveling day; a loss of 3,000 years for each 1,000,000 sleeping car passengers. Business men would make short broken journeys in order to sleep, or continuous journeys penalized by discomfort and peril to health. Science has produced no substitute for sleep, but Pullman service has produced an anodyne for night travel.



The Single Bedroom Provides the Utmost Privacy



The Four-Position Seat Adds to the Passenger's Comfort

Railroads sell sleep as well as transportation and sleep as well as the comforts of Pullman service are important factors in merchandising railroad transportation since no competing agency can offer the same service or a substitute. In contrast to highway travelers, patrons of the railways are able to travel thousands of miles without stopping enroute and arrive at destination rested. The cost of sleeping enroute is moderate—often considerably less than the cost of stopping overnight at a hotel. The saving in time is apparent. For those who wish to travel at minimum cost, tourist sleeping car accommodations are available in some areas.

Increasing Degree of Comfort Provided

Standard Pullman service affords the maximum of comfort for travelers, a standard that compares favorably with that at leading hotels. The patron is not only provided with a place to sleep but has for his convenience the services of a porter and smoking and dressing rooms. As a result of continued efforts by the Pullman Company to increase the comfort of sleeping cars, a car of 1933 differs from one of 1858 in 150 major respects, while improvements are still being made and new ideas tried out, so that between many places a passenger today has a variety of accommodations from which to select.

During the past few years the Pullman Company has been especially active in developing new types of accommodations. While not yet in service, the most recent refinement in Pullman accommodations is the all-aluminum air-conditioned compartment observation-lounge car now on exhibit at A Century of Progress Exposition at Chicago, and described in the *Railway Age* of June 10, page 823. Maximum passenger appeal is assured by the provision of all modern travel con-

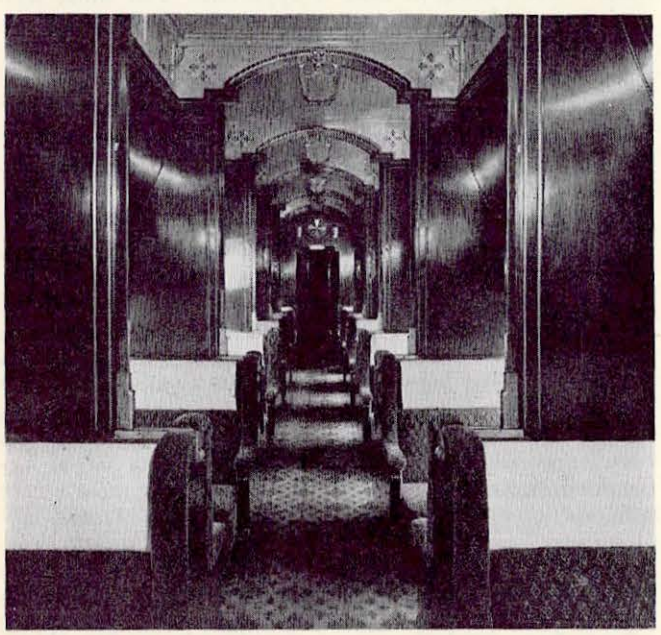
veniences and comforts, including filtered and properly-conditioned air during all seasons and several innovations in design calculated to exclude dust and dirt, minimize noise and vibration, etc.

One of the latest developments of the Pullman Company is an experimental type of accommodation termed the "Duplex" with two single rooms on the ground floor and two more upstairs, together with 10 standard sections. This is an adaptation of the single-room idea, with a slight sacrifice of space but not of comfort. Each room, upstairs and down, has a lounge, the back seat of which can be turned down to form a spring-mattressed bed at night. Each room has its individual toilet facilities and also its own window and self-regulating heating and lighting. In the lower room, the baggage is placed in an overhead rack, in the upper it is placed to the left of and under the short staircase. Because of the day and night features, a passenger can retire when he pleases and, if an early riser, may have his bedroom transformed into a daylight apartment upon arising. In addition to the "Duplex," the Pullman Company is now operating a 16-section semi-double deck, air-conditioned bedroom car between New York and Washington.

The latest experiment to insure comfort and convenience embodies several distinct improvements in upper berths. These include a platform on which the passenger may stand while dressing, a fixed stairway that enables him to ascend and descend without the porter's assistance, and a dormer window that not only enables the occupant to look out but also permits of ventilation to his taste.

A departure to enhance the comfort of passengers that is more generally available and that marks the trend from the open-type sleeping car toward increasing privacy is the growing use of single and double bedrooms. The single bedroom contains a regular bed 32 in. wide and 6½ ft. long, to which silk coverlets add a touch of distinction. Each room contains full toilet facilities compactly arranged, the washstand and hopper having the appearance of an upholstered chair. A small folding table, attached to the wall opposite the bed, can be used for writing, for toilet articles or for breakfast service.

In the double bedroom are a standard upper berth and a davenport which can be converted into a bed at night and which is equipped with a spring mattress having 497 steel coils and 6½ lb. of hair. This room also includes complete toilet facilities and a desk-dining table. Both types of rooms are equipped with separate heat control, a ventilator in the door, blower and exhaust fans, a thermos bottle, clothes hooks and baggage space.



The Open Section Car Has Been Made More Private by Permanent Head Boards

However, the larger part of the Pullman travel is and will probably long continue to be in the standard lower or upper berth. Further effort is, therefore, being made constantly to increase the travel comfort of these patrons, the latest evidence of which is the development of seats, which are so constructed that they can be shifted into any one of four different positions for day riding, thereby permitting passengers to ride with ease and comfort in the position they prefer. In addition to their normal position with the backs at an angle of 98 deg., these seats can be pulled forward so that the backs assume an angle of 110 deg., of 120 deg., or 130 deg. With both section seats pulled out to the fourth position, passengers may ride in a semi-reclining attitude and daytime naps can be taken in comfort.

Additional travel comfort has been provided also through the application of improved spring cushions to chairs, settees and couches, of automobile-type windows and regulators to observation sun rooms, of adjustable mirror lights to washstand mirrors in bedrooms and of a new inner spring construction to upper berths. At the same time, experiments have been made with a rubber buffer mechanism and draft gears to increase riding comfort. The wants of passengers can now be supplied from toilet cabinets which contain many items often overlooked in a hurried departure. To eliminate much of the weariness of day travel, the chaise lounge has been developed, with a "filler stool," with a spring cushion and upholstery matching that of the standard seat, placed between the seats in a section so that it will support the limbs of the patron who wishes to ride in a reclining position.

Besides these improvements, efforts are being made to design cars so as to eliminate the annoyance of dust and cinders. The first step, improved window sashes and fine-meshed screens, has been augmented by air conditioning equipment which filters the air before it enters the car. Other devices to ensure cleanliness in Pullman cars are now being developed.

As a result, the Pullman car patron of today is offered the following types of services, nationally or in some sections of the country: (1) Lower berth, (2) upper berth, (3) single room, (4) double room, (5) private section, (6) enclosed section, (7) compartment and (8) drawing room. The 1933 patron may also enjoy such conveniences as (1) conditioned air, (2) the chaise lounge, (3) permanent ladders for upper berths, (4) adjustable four-position seats, (5) improved drawing room sofas, (6) adjustable minor lights on washstands, (7) automobile type windows, (8) rubber buffer mechanisms and roller bearings that improve riding qualities, (9) individual heat control, (10) improved ventilation, (11) wardrobes for compartments and (12) variable interior designs with plain colors; new decorative schemes and improved lighting fixtures.

Sales Effort Needed

With such service available, the stimulation of the use of Pullman service to increase rail travel becomes a merchandising problem for the railroads and the Pullman Company. It is an important problem since, in addition to being a means of attracting passengers from other agencies of transportation and securing the full revenue therefrom, increased patronage of Pullman cars adds to the revenues of the carriers by reason of the

surcharge and the profit-sharing arrangement with the Pullman Company.

It is true that patrons in the average ticket office are in a hurry to purchase their tickets and the ticket agent is afforded little time in which to sell them other than what they ask for. Coupled with this situation is the fact that a patron does not become a prospect for Pullman accommodations until he purchases his railroad ticket. However, this condition does not eliminate the possibility of ticket agents pushing Pullman service more aggressively. As a rule, these agents are given little training in selling other than by the local officer in direct charge of the office and their experience is limited to that acquired in the one office.

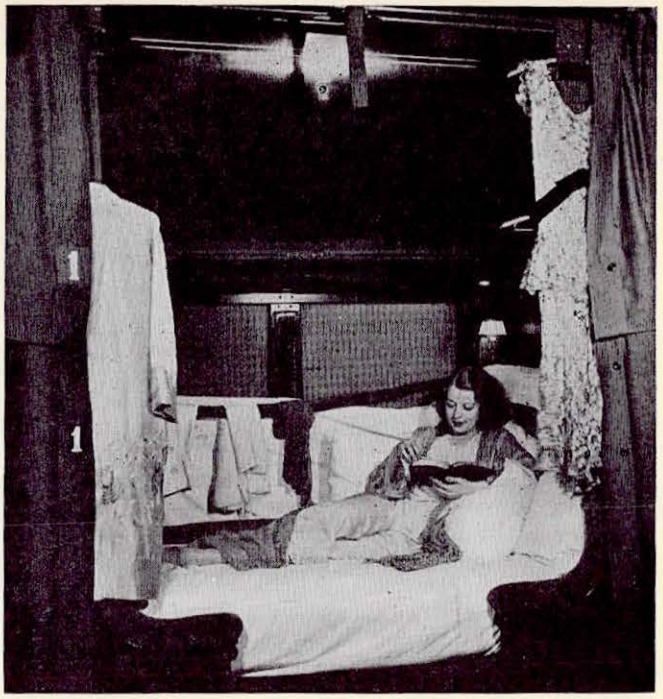
When an occasional traveler makes up his mind to take a trip, he commonly confers with agents to secure information relative to the rates and service offered by the railroads, as well as by the motor coaches and frequently by the airplanes. This preliminary contact with the prospect affords a valuable opportunity for the railroad ticket agent to merchandise Pullman service to the advantage of the railroads. To ascertain the extent to which this is being done, calls were made at the various railroad ticket offices in a large middle western city, seeking information as to rail, motor coach and airplane service to Minneapolis, Minn. In every case, the agent assumed a most formal attitude, and volunteered little information. The conversation at the consolidated ticket office was as follows:

"Within the next two weeks I expect to be able to get away from business and spend three or four days in Minneapolis. What service do you offer?"
"We have one morning and three evening trains."
"How does the rail service compare with motor coach and airplane service?"
"You can travel either way."
"The distance is about 400 miles. Can't one make the trip by automobile in the same time as the train?"
"If you drive fast enough. We have a coach rate of $8."

At a railroad ticket office, the following conversation took place:

"We have one morning and three evening trains. When do you expect to go?"
"Within the next two weeks."
"If you wish to travel on Labor Day, you can take advantage of our low rates. We will have a round-trip coach rate of $8.80 and a round-trip sleeping car rate of $14.95 which, with a sleeping car fare of $5.63, makes a total of $20.58."
"Do you have motor coach service?"
"Yes, we do, but you will have to get information about that from our other office. It is a very pleasant trip by motor coach."
"How long does it take to go by airplane?'
"About 4½ hr. The cost is about the same as the one-way rail fare with the Pullman fare. It will cost you about $19 for one way."
"Are the roads in good condition if I should care to drive?"
"Yes, they are. It's a nice drive and when you get into Wisconsin, you can travel very fast. The best place to get information as to the condition of the roads is daily newspapers or the motor club."

There are about 4,000 railroad ticket offices in the United States where one can buy railroad and Pullman tickets and it is not implied that these two cases can be considered as typical of the standard of salesmanship found among all of the ticket agents in all of these offices. However, they are sufficiently typical to demonstrate that there is a need for better salesmanship in many offices. In neither instance was any effort made to present the advantages of railroad and Pullman service in contrast with that of competing agencies. In the case in question, the prospect stated that his time was limited and he would have been interested in any plan that would lengthen his stay in Minneapolis. By using the railway and its sleeping car service instead of the motor coach or private automobile, the prospect could travel in comfort at night and have one or two additional days in Minneapolis.



A Single Occupancy Section Sold by a Pullman Conductor

Ticket Agents Need Instructions

Only casual investigation is required to show how lacking the average ticket agent's training is in ways to ascertain the prospect's needs and then on how to sell him the idea of traveling by rail. Often an agent will describe in detail the scenic wonders of the territory in which the prospect is interested and then fail to present the character of the rail service to and from that territory. As a result, many people do not know what the railroads offer in service.

An opinion expressed by a disinterested person is often of the greatest value in bringing about a realization of the value of one's own inventory. That American railway service is of merit is evidenced by comments made by Winston Churchill, the eminent British statesman and world traveler, in Collier's for August 5, 1933, which in part follows:

"Many English people do not like the long sleeping cars in which strangers of both sexes are separated from one another only by curtains, and where the temperature is often tropical till you open the window, and arctic when you do. Still, they are very practical once you are used to them. No one could require better accommodation than a drawing room compartment all to one's self. Our sleeping berths are nearly always at right angles to the train, and the beds are so narrow that one can hardly turn over in them. Moreover, the sheets and blankets are also on the narrow side, and at the slightest movement come untucked. The United States railway bed is a splendid, soft, broad affair. It lies lengthwise with the train, and I slept in one, night after night, as soundly as I should in any house."

A pertinent example of what can be done to capitalize on this service and influence Pullman business is afforded by an incident that took place a short time ago. H. O. Turville, a member of the Pullman Company's yard forces at Salt Lake City, Utah, was a representative at the Zone Committee meeting at San Francisco, Cal.

Being an old soccer football player and steadfast enthusiast, he naturally called upon some of his clan. One happened to be secretary of the Pacific Coast Soccer League and from him Mr. Turville learned that San Francisco was to send a party of 20 players and officials for a series of matches at Los Angeles; also that the trip was to be made by steamship. "You are taking a long chance of winning any games if you go by sea," said he. "You are putting all your players on a boat with the idea of taking the field soon after you land. Most of the boys are not accustomed to travel by water and especially on the ocean; and if they are sick, they will be weak when they reach Los Angeles. Why not eliminate this danger by putting them in nice, comfortable Pullman berths for a one-night run to Los Angeles, instead of possibly tossing about for one and one-half days on the water?"

The point was appreciated at once and the San Francisco soccerites went by rail in Pullmans. After a comfortable night's rest, they trounced Los Angeles. As a result, when the Los Angeles team went to San Francisco for a series of return matches, they also traveled both ways via railroad.

Rates a Factor

Another phase of the problem of capitalizing on Pullman accommodations, to which the railways can well afford to give consideration is their cost. Such lower rate excursions as have been operated show that more people will use Pullman accommodations when the price is not too high. The question of price then requires a study of the following questions: Is the cost of using Pullman accommodations too high for the average prospective traveler? Should there be a differential between coach rates and sleeping car rates? Should there be a surcharge? Are the Pullman Company's rates too high? A questionnaire sent to 27 western railroads to determine their position on passenger fare reductions shows that 15 railroads favor the discontinuance of the Pullman surcharge, while 3 favor its retention, 5 favor a reduction and 4 expressed no opinion. Further, 9 roads favor the same rail rate in sleeping cars and coaches, 13 favor lower rates in coaches than in sleeping cars and 1 favors lower fares in coaches for short hauls.

Large Market for Pullman Service

That there is a need for better salesmanship on the part of railway ticket agents is shown by the results that the Pullman Company has attained in its campaign to increase the sale of single occupancy sections by its conductors and porters after the railway agents have completed their sales, the increase in the use of sections effected by this salesmanship, aided by lower rates, being 700 per cent. In 1932, S. O. S. sales, wherein the passenger is induced to occupy the entire section at a small additional charge, totaled 487,471, while in 1933, these sales amounted to 27,092 for the four weeks ending April 21; 28,045 for the four weeks ending May 19; 38,553 for the four weeks ending June 16; 43,392 for the four weeks ending July 14; and 42,499 for the four weeks ending August 11. In June alone, sales of single occupancy sections and upper berths and changes to superior accommodations by Pullman employees after patrons boarded trains totaled $145,500, which amount included a surcharge of $48,500, which latter railroad revenue ticket agents failed to secure for their railroads when passengers bought their rail transportation.

Week-end excursions in Pullman cars operated during the last few years prove conclusively that people are anxious to travel in Pullman equipment. In every one of these excursions there have been passengers making their first trip in sleeping cars and frequently, their first trip in a train. About 200 of these excursions are now being operated each year—an average of 6 cars per excursion and about 27 passengers per car. The figures for the first six months of this year show a continuation of the same general level of this created traffic, namely, 321 cars with 7,815 passengers, or 24.3 passengers per car.

That reduced rates stimulate traffic is shown by the increase in travel that has been stimulated to and from Chicago in connection with A Century of Progress travel by reduced rail and Pullman rates, 3,281 extra Pullman cars being operated in July and 3,961 extra cars during August. On the two days a week that these rates are effective, not only have more cars been used, but the number of passengers carried in each car is over 30 per cent in excess of average loading. Obviously, this shows the desire on the part of World's Fair visitors to make their journey in Pullman comfort, when the rates for both rail and Pullman service are made sufficiently attractive.

The extent to which reduced rates have stimulated travel to and from Chicago to A Century of Progress are enlightening, particularly since the undertaking shows results under different plans of rate making and of salesmanship. In the eastern section of the country, low rates good in Pullman cars with reduced Pullman rates have brought out, since the Fair started, an almost incredible amount of rail travel, popular trains being operated in as many as seven sections and carrying more passengers than would normally arrive on the entire railroad in one day. From the East, the reductions have been effective twice a week and the bulk of the travel has moved on the low rate days. In the Southeast low rates valid in Pullman cars have been effective once a month and here also the amount of business stimulated is exceedingly large. In the Southwest the rate structure favored the use of tourist cars and for a while, the lowest rail rates were good in tourist cars with the result that as many as 200 additional cars of that class were required for a single day's travel, where normally no through cars are operated. In the Middle West the rate structure and sales method favor the day coach and the amount of travel in sleeping cars in this area was far below that moving in coaches.

Of the 3,281 extra cars required to handle A Century of Progress travel arriving in Chicago in July, 2, 156, or 65.7 per cent came from the East. In August, 63.5 per cent of the 3,961 extra cars came from the East. That the benefit of these reduced rates increased as they became better known is indicated by the fact that in July the average number of extra cars on the two eastern

(*Continued on page 410*)

In the Issue of September 30

Is railway passenger service properly sold? Have the merchandising methods of the railways kept pace with those of their competitors? Are their ticket agents and other sales forces properly instructed in selling? These and allied questions will be discussed in the next article in the Traffic Development Series, which will appear in the *Railway Age* of September 30.

Marked Reductions in Tie Renewals

Statistics compiled from annual reports of the railroads for 1932 show extent of deferred application

THE deficiency of tie renewals during the last three years, and especially in 1932, is clearly brought out in the tabulation of crosstie renewals compiled for the Committee on Ties of the American Railway Engineering Association from the annual reports of the Class I railways to the Interstate Commerce Commission. This tabulation discloses some marked variations in the records of different roads, but because of the many fac-

Statistics on Crosstie Renewals on Leading Railroads in the United States for the Calendar Year Ending December 31, 1932

ALL FIGURES ARE EXCLUSIVE OF BRIDGE AND SWITCH TIES

Road	Average number of wooden crosstie renewals per mile of maintained track						Average percentage of wooden crosstie renewals		Wooden ties untreated (U)		Wooden ties treated (T)		Cost of wooden crosstie renewals in 1932	
	1928	1929	1930	1931	1932	5 year average	1932	5 year average	Per Cent Applied	Average cost	Per Cent Applied	Average cost	Weighted average per tie	Per thousand equated gross ton-miles
New England Region:														
Bangor & Aroostook	230	255	253	236	203	235	7.1	8.2	100	$.79	....	....	$.79	$.101
Boston & Maine	277	260	236	164	64	203	2.2	7.1	12.4	1.12	87.6	$1.60	1.54	.027
Canadian National Lines in N. E.	199	235	160	87	57	146	1.9	4.6	58.1	.83	41.9	1.85	1.26	.042
Canadian Pacific Lines in Maine	330	311	320	262	181	281	6.3	9.7	1.5	.65	98.5	1.51	1.50	.068
Canadian Pacific Lines in Vermont	518	326	313	254	200	322	5.8	9.9	....	.74	100	1.48	1.49	.078
Central Vermont	312	249	244	237	174	243	5.5	7.7	1.6	.50	98.4	1.84	1.82	.086
Maine Central	229	204	244	222	184	217	6.1	7.2	....	.98	....	1.54	1.15	.097
New York Connecting	73	238	194	293	229	205	7.2	6.4	....	....	100	1.90	1.90	.042
New York, New Haven & Hartford	328	267	253	165	121	224	4.2	7.3	0.2	.35	99.8	1.55	1.55	.051
Rutland	282	270	224	210	189	235	6.3	7.9	....	....	100	1.43	1.43	.084
Great Lakes Region:														
Ann Arbor	242	202	148	114	179	177	6.0	5.9	....	....	100	1.48	1.48	.093
Cambria & Indiana	*a*	*a*	*a*	*a*	235	235	8.6	8.6	100	1.16	....	....	1.16	.132
Delaware & Hudson	127	201	172	111	125	147	4.1	4.9	6.2*	1.16	86.7	2.39	2.30	.056
Delaware, Lackawanna & Western	98	84	80	76	64	81	2.2	2.8	.8	1.13	99.2	1.69	1.69	.018
Detroit & Mackinac	232	164	202	97	126	167	4.2	5.5	48.3*	.49	51.4	.98	.76	.125
Detroit & Toledo Shore Line	163	132	112	84	88	115	2.9	3.7	....	....	100	1.65	1.65	.050
Erie (Inc. Chgo. & Erie)	210	221	199	173	135	188	4.7	6.8	0.6	.86	99.4	1.84	1.83	.039
Grand Trunk Western	347	303	191	156	115	215	3.6	6.6	34.9	1.00	65.1	1.53	1.34	.056
Lehigh & Hudson River	51	49	66	54	55	55	2.1	2.1	....	....	100	1.49	1.49	.019
Lehigh & New England	118	132	121	107	72	110	2.4	3.7	1.5	.77	98.5	1.97	1.95	.062
Lehigh Valley	65	74	64	53	45	60	1.7	2.1	....	....	100	1.83	1.83	.020
Monongahela	277	202	215	145	81	184	2.8	6.3	91.9	1.43	8.1	2.29	1.50	.042
Montour	307	306	259	163	95	224	3.4	8.0	19.8	1.43	80.2	1.81	1.74	.061
New Jersey & New York	195	124	167	145	172	160	6.0	5.5	0.3	1.33	99.7	1.70	1.70	.059
New York Central	138	129	111	91	52	104	1.7	3.6	0.7*	1.00	98.4	1.67	1.66	.016
New York, Chicago & St. Louis	169	169	135	70	73	122	2.4	3.9	....	....	100	1.83	1.83	.028
New York, Ontario & Western	174	134	119	116	105	130	3.7	4.6	0.7	.81	99.3	1.56	1.55	.041
New York, Susquehanna & Western	218	205	174	125	112	167	3.9	6.0	....	....	100	1.46	1.46	.070
Pere Marquette	227	213	168	191	140	187	4.7	6.4	0.5	.44	99.5	1.52	1.52	.077
Pittsburgh & Lake Erie	91	73	62	4	5	48	0.2	1.7	....	....	100	1.98	1.98	.003
Pittsburg & Shawmut	319	322	158	159	182	228	6.5	8.4	100	.74	....	....	.74	.090
Pittsburgh & West Virginia	93	182	108	117	88	116	3.0	4.0	100	1.29	....	....	1.29	.057
Pittsburg, Shawmut & Northern	264	243	185	165	140	200	4.8	7.0	4.2	.81	35.8	1.70	1.13	.134
Wabash	238	221	177	119	134	178	4.3	5.7	1.7	.92	98.3	1.54	1.53	.042
Central Eastern Region:														
Akron, Canton & Youngstown	375	363	250	115	155	251	5.4	8.5	100	1.30	....	....	1.30	.144
Atlantic City	98	104	109	114	23	89	0.8	3.1	9.1	.64	90.9	1.97	1.85	.018
Baltimore & Ohio	165	153	123	51	47	110	1.7	3.9	1.1	1.15	98.9	1.67	1.67	.018
Bessemer & Lake Erie	224	227	231	238	171	218	5.5	6.9	2.0*	1.17	97.4	1.85	1.84	.164
Central R. R. of New Jersey	85	79	83	82	72	80	2.6	2.9	....	....	100	1.82	1.82	.027
Chicago & Eastern Illinois	132	119	101	98	100	110	3.2	3.5	†	1.26	100	1.45	1.45	.044
Chicago & Illinois Midland	268	223	126	105	112	166	3.6	5.6	2.2	.50	97.8	1.04	1.03	.032
Chicago, Indianapolis & Louisville	130	132	156	99	66	117	2.2	3.8	1.5*	.63	96.2	1.29	1.27	.024
Detroit, Toledo & Ironton	113	164	149	71	90	118	3.1	4.1	....	....	100	1.72	1.72	.089
Elgin, Joliet & Eastern	280	269	226	165	96	206	3.1	6.7	....	....	100	1.43	1.43	.072
Illinois Terminal	114	77	94	84	83	90	3.1	3.3	15.8*	.75	85.0	1.31	1.24	.064
Long Island	224	193	129	91	69	141	2.7	5.1	†	.81	100	1.74	1.74	.015
Missouri-Illinois	*c*	260	197	221	138	204	4.4	6.7	99.2	.41	0.8	1.14	.42	.081
Pennsylvania	167	159	124	75	48	115	1.7	4.1	0.6	1.28	99.4	1.66	1.66	.014
Reading	156	148	137	105	28	115	1.0	4.0	....	....	100	1.66	1.66	.010
Staten Island Rapid Transit	113	76	73	62	54	76	1.9	2.7	....	....	100	2.44	2.44	.036
Western Maryland	378	256	206	187	116	227	4.0	7.9	20.0	1.01	80.0	1.73	1.59	.057
Wheeling & Lake Erie	307	267	171	133	46	186	1.5	6.2	14.0*	.99	83.3	1.52	1.44	.027
Pocahontas Region:														
Chesapeake & Ohio	251	211	173	127	84	168	2.7	5.5	†	.37	100	1.22	1.22	.013
Norfolk & Western	223	203	176	164	114	176	3.7	5.7	†	.50	100	1.20	1.20	.023
Richmond, Fredericksburg & Potomac	326	424	401	295	298	349	10.4	12.2	100	.79	....	....	.79	.034
Virginian	359	355	342	234	169	291	5.4	9.2	35.7*	.70	64	1.38	1.14	.036
Southern Region:														
Alabama Great Southern	456	409	342	343	235	357	7.6	11.6	6.3	.83	93.7	1.38	1.35	.091
Atlanta & West Point	207	190	198	160	108	173	3.6	6.1	0.4	1.11	99.6	1.43	1.42	.037
Western Ry. of Alabama	356	231	268	171	67	216	2.2	7.3	3.0	1.11	97.0	1.41	1.40	
Atlanta, Birmingham & Coast	332	303	243	222	179	256	6.2	8.9	55.8	.55	44.2	1.22	.84	.098
Atlantic Coast Line	224	234	218	210	186	214	6.4	7.4	40.7	.62	59.3	1.00	.85	.066
Central of Georgia	191	204	144	143	109	158	3.9	5.7	15.4	.65	84.6	.80	.78	.037
Charleston & Western Carolina	300	310	275	237	205	266	7.0	9.3	100	.96	....	....	.96	.151
Cincinnati, New Orleans & Texas Pacific	441	394	300	281	185	317	5.9	10.2	3.4	.79	96.6	1.49	1.46	.045

*Owing to the fact that the total ties renewed by a few roads included some second-hand, steel or narrow-gage ties, the percentages of treated and untreated ties do not total 100 per cent in all cases.

†Proportion is less than one-tenth of one per cent.

Statistics on Crosstie Renewals on Leading Railroads in the United States for the Calendar Year Ending December 31, 1932—Continued

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Road	Average number of wooden crosstie renewals per mile of maintained track						Average percentage of wooden crosstie renewals		Wooden ties untreated (U)		Wooden ties treated (T)		Cost of wooden crosstie renewals in 1932	
	1928	1929	1930	1931	1932	5 year average	1932	5 year average	Per Cent Applied	Average cost	Per Cent Applied	Average cost	Weighted average per tie	Per thousand equated gross ton-miles
Clinchfield	407	476	477	399	376	427	12.4	14.0	65.1	$.73	34.9	$1.50	$1.00	$.094
Columbus & Greenville	540	447	415	152	229	356	7.2	11.2	28.7	.67	71.3	1.24	1.08	.215
Florida East Coast	95	62	36	34	93	64	3.2	2.3	100	.55	†	.65	.55	.027
Georgia	226	286	250	240	178	236	5.8	7.8	41.3	.96	58.7	1.53	1.29	.085
Georgia & Florida	191	182	216	256	155	200	5.8	7.5	100	.56	....	....	.56	.150
Georgia, Southern & Florida	346	367	247	256	153	274	4.9	8.7	84.5	.86	15.6	1.36	.94	.065
Gulf & Ship Island	248	359	320	288	30	248	1.0	8.0	11.4	.20	88.6	.97	.88	.025
Gulf, Mobile & Northern	199	210	213	147	143	183	4.5	5.9	32.6	.41	67.4	.94	.77	.056
Illinois Central	179	188	161	166	79	155	2.6	5.1	2.0	1.21	98.0	1.08	1.09	.021
Yazoo & Mississippi Valley	278	298	237	236	70	224	2.3	7.3	7.0	1.14	93.0	1.12	1.12	
Louisville & Nashville	240	235	200	168	103	190	3.6	6.6	8.2	1.16	91.8	1.66	1.62	.044
Mississippi Central	157	197	204	167	96	164	3.0	5.2	7.7	.53	92.3	.96	.93	.090
Mobile & Ohio	363	368	361	287	272	330	8.6	10.4	100	.57	....	....	.57	.056
Nashville, Chattanooga & St. Louis	279	250	296	319	243	277	8.2	9.3	3.7	.42	96.3	1.19	1.16	.090
New Orleans & Northeastern	420	337	273	248	222	301	7.2	9.8	0.8	1.01	99.2	1.24	1.24	.077
New Orleans Great Northern	207	300	234	132	121	197	4.0	6.2	15.2*	.46	78.2	.97	.88	.070
Norfolk Southern	248	283	306	228	163	246	5.7	8.8	100	.61	....	....	.61	.079
Northern Alabama	645	437	385	351	325	429	10.3	13.5	100	.76	....	....	.76	.208
Seaboard Air Line	241	251	227	258	215	239	6.9	7.7	64.6	.68	35.4	.88	.75	.064
Southern	391	392	351	336	298	354	9.4	11.2	66.6	.75	33.4	1.49	1.00	.085
Tennessee Central	441	435	310	258	246	339	7.9	10.9	58.8	.56	41.2	1.94	1.13	.159
Northwestern Region:														
Chicago & North Western	198	183	173	136	108	160	3.7	5.5	4.9	.67	95.1	1.16	1.14	.049
Chicago Great Western	211	205	220	243	247	225	8.5	7.8	40.8	.79	59.2	1.25	1.07	.071
Chicago, Milwaukee, St. Paul & Pacific	302	287	214	185	162	230	5.5	7.9	17.9	.47	82.1	1.16	1.03	.068
Chicago, St. Paul, Minneapolis & Omaha	330	282	223	255	201	260	6.8	8.9	13.8	.71	86.2	1.21	1.14	.087
Duluth, Missabe & Northern	239	225	174	160	11	161	0.4	5.3	45.0	.63	55.0	1.81	1.28	.032
Duluth, South Shore & Atlantic	323	272	235	214	157	241	5.4	8.1	100	.54	†	2.52	.54	.090
Duluth, Winnipeg & Pacific	426	386	266	321	246	329	8.2	11.0	100	.68	....	....	.68	.106
Great Northern	220	205	190	168	140	185	4.4	5.8	26.4*	.50	71.2	1.17	.98	.062
Green Bay & Western	297	322	296	300	268	297	9.6	10.6	100	.70	....	....	.70	.157
Lake Superior & Ishpeming	236	250	230	150	105	194	3.5	6.5	100	.73	....	....	.73	.284
Minneapolis & St. Louis	203	150	122	102	101	135	3.3	4.5	53.5	.81	46.5	1.43	1.10	.066
Minneapolis, St. Paul & Sault Ste. Marie	271	238	222	173	164	214	6.0	7.4	38.7	.52	61.3	1.39	1.05	.098
Northern Pacific	180	169	124	103	101	135	3.5	4.6	3.7	.43	96.3	1.23	1.20	.061
Oregon-Washington R. R. & Nav. Co.	227	198	167	98	65	151	2.3	5.2	†	.36	100	.99	.99	.030
Spokane International	363	356	348	326	367	352	13.0	12.5	100	.49	....	....	.49	.209
Spokane, Portland & Seattle	328	356	294	216	174	273	5.8	9.3	49.7	.45	50.3	1.15	.80	.051
Central Western Region:														
Alton R. R.	287	218	254	241	213	243	7.1	8.2	97.9*	1.00	0.4	1.67	1.00	.055
Atchison, Topeka & Santa Fe	180	176	160	117	82	143	2.7	4.7	0.8	.93	99.2	1.28	1.28	.032
Panhandle & Santa Fe	299	146	140	64	75	139	2.5	4.7	....	....	100	1.19	1.19	
Chicago, Burlington & Quincy	170	168	151	134	106	146	3.4	4.7	....	....	100	1.25	1.25	.048
Chicago, Rock Island & Pacific	150	156	128	106	38	115	1.3	3.8	0.5	.50	99.5	1.12	1.11	.015
Chicago, Rock Island & Gulf	206	184	185	98	44	137	1.5	4.7	....	....	94.8*	1.68	1.68	
Colorado & Southern	168	156	140	116	112	139	3.7	4.6	40.6*	.40	49.4	1.27	.88	.057
Denver & Rio Grande Western	303	198	175	162	130	193	4.2	6.2	3.4*	.88	68.0	1.10	1.09	.065
Denver & Salt Lake	214	158	138	130	123	153	4.1	5.1	51.2	.81	48.8	1.24	1.02	.086
Fort Worth & Denver City	267	212	178	90	68	154	2.2	5.1	....	....	100	1.31	1.31	.039
Los Angeles & Salt Lake	162	167	132	124	112	139	4.0	5.0	....	....	100	1.62	1.62	.042
Nevada Northern	193	183	169	133	134	162	4.7	5.6	100	.77	....	....	.77	.242
Northwestern Pacific	278	294	270	210	106	233	3.6	7.9	100	.62	....	....	.62	.041
Oregon Short Line	176	177	151	111	59	135	2.1	4.9	0.7	.80	99.3	1.32	1.31	.032
St. Joseph & Grand Island	221	183	126	124	69	144	2.3	4.9	99.5	1.23	0.5	2.05	1.23	.030
San Diego & Arizona	113	114	132	90	84	107	2.9	3.6	96.0*	.96	....	....	.96	.169
Southern Pacific Co.—Pacific Lines	210	202	164	137	97	162	3.3	5.5	21.4	.82	78.6	1.16	1.09	.029
Toledo, Peoria & Western	176	247	155	166	155	180	4.9	5.7	96.8*	.88	†	1.43	.88	.084
Union Pacific	192	162	123	108	85	134	3.0	4.7	†	.99	100	1.39	1.39	.020
Utah Ry.	196	201	234	187	110	185	4.2	6.9	64.6	.73	35.4	1.97	1.17	.041
Western Pacific	424	426	338	261	199	327	6.8	11.3	100	.64	....	....	.64	.035
Southwestern Region:														
Burlington-Rock Island	284	246	400	145	22	232	0.7	7.5	....	....	100	1.00	1.00	.016
Fort Smith & Western	316	342	311	241	254	293	8.1	9.4	100	.43	....	....	.43	.085
Fort Worth & Rio Grande	308	426	153	118	156	232	4.9	7.3	6.8	.74	93.2	1.29	1.25	.207
Gulf Coast Lines:														
Beaumont, Sour Lake & Western	238	219	216	115	58	169	2.0	5.6	....	....	96.5*	1.14	1.14	....
New Orleans, Texas & Mexico	280	240	224	126	93	193	3.0	6.3	....	....	100	1.13	1.13	.017
St. Louis, Brownsville & Mexico	315	184	158	60	28	147	0.9	4.8	....	....	98.9*	1.04	1.04	....
Gulf, Colorado & Santa Fe	139	205	191	125	59	143	1.8	4.4	1.9	.34	98.2	1.23	1.22	.031
International-Great Northern	281	214	204	167	93	191	3.1	6.4	....	....	100	.98	.98	.030
Kansas City Southern	162	157	169	146	151	157	4.8	5.0	†	.55	100	1.06	1.06	.054
Texarkana & Fort Smith	94	117	140	156	90	119	3.2	3.9	....	....	100	1.08	1.08	
Kansas, Oklahoma & Gulf	188	112	117	107	92	123	2.9	3.9	2.9	.36	97.1	1.03	1.01	.054
Louisiana & Arkansas	323	303	339	253	184	281	5.8	8.9	53.6	.63	46.4	.97	.79	.089
Louisiana, Arkansas & Texas	443	330	374	309	242	338	7.6	10.6	47.7	.41	52.3	.99	.71	.166
Midland Valley	240	208	165	112	76	161	2.4	5.0	2.1	.41	97.9	1.08	1.06	.088
Missouri & North Arkansas	263	326	250	240	178	250	5.7	8.2	100	.43	....	....	.43	.076
Missouri-Kansas-Texas Lines:														
Missouri-Kansas-Texas	214	201	168	98	129	162	4.1	5.1	99.6	.78	0.4	1.31	.78	.030
Missouri-Kansas-Texas of Texas	265	234	152	87	108	167	3.4	5.3	99.9	.76	0.1	1.31	.76	
Missouri Pacific	280	294	217	164	96	210	3.1	6.8	15.2	.75	84.8	1.08	1.03	.027
Oklahoma City-Ada-Atoka	*d*	*d*	404	108	97	203	3.1	6.5	88.2	.57	11.8	1.07	.63	.100
St. Louis-San Francisco	142	204	168	124	167	161	5.4	5.2	8.3	.45	91.7	1.04	.99	.069
St. Louis, San Francisco & Texas	234	334	149	133	164	186	5.2	5.9	18.6	.55	81.4	1.31	1.17	.154
St. Louis Southwestern Lines:														
St. Louis Southwestern	378	332	260	90	75	220	2.4	6.9	0.7*	.26	96.7	1.22	1.22	.039
St. Louis Southwestern of Texas	286	348	148	95	81	191	2.6	6.1	....	....	93.7*	1.19	1.19	
San Antonio, Uvalde & Gulf	210	241	240	225	132	210	4.6	7.3	....	....	99.5	1.20	1.20	.137
Texas & New Orleans	238	222	173	139	99	174	3.7	6.4	15.3	1.06	84.7	1.15	1.13	.049
Texas & Pacific	433	297	170	107	54	211	1.8	6.9	†	.59	100	1.07	1.06	.015
Texas Mexican	273	302	269	184	152	236	5.3	8.2	....	....	99.5*	1.05	1.05	.206
Wichita Falls & Southern	220	215	247	224	176	217	5.3	6.6	....	....	100	.99	.99	.316

* Owing to the fact that the total ties renewed by a few roads included some second hand, steel or narrow-gage ties, the percentages of treated and untreated ties do not total 100 per cent in all cases.

† Proportion is less than one-tenth of one per cent.

tors that influence the renewal requirements it is necessary to proceed with caution in comparing the records of the roads. The character of ties in track, their average service life, the climate, the record of the property as to new-line construction or of reconstruction, second-tracking and acquisition of other roads, as well as the policy pursued with respect to tie condition all affect the tie renewals. For example, the renewal of as few as 50 ties per mile on one road may insure a better average tie condition than the application of 200 ties on another property.

An examination of the figures giving the renewals per mile of maintained track discloses wide variations, both as to the number of ties laid in renewals and also as to the relation between the renewals made in 1932 and those made on the same railway during 1928 and 1929.

The heaviest renewal in 1932, 376 ties to the mile, made by the Clinchfield, compares with 476 ties in 1929; while the least number of renewals, 5 per mile, was reported by the Pittsburgh & Lake Erie. Six roads reported increases in their renewals in 1932 compared with the average for 1928 and 1929. On the Lehigh & Hudson River, for example, the renewals increased from 50 to 55, on the Florida East Coast, from 79 to 92; and on the Chicago Great Western from 208 to 247. On all but these and three shorter lines the tie renewals were progressively less in 1930-31 and 32.

However, in considering the average rate of renewals for any railway in 1932 it is necessary to take into account its record in previous years—say, 1928 and 1929. For example, the renewal of only 75 ties in 1932 by a railway that inserted an average of 373 ties per mile in 1928 obviously implies a much larger decrease in average tie condition than is the case on a railway that placed only 72 ties per mile in 1932 but had a renewal rate of only 85 in 1928 and 79 in 1929. Of course, this comparison cannot be the criterion in all cases because it implies that renewals were normal in 1928 and 1929, which was not necessarily true on all railroads.

A question arises as to the extent to which a reduction in tie requirements is to be expected as a result of the presence of a greater proportion of treated ties in track. It has also been contended that tie renewals of not greatly to exceed 100 ties per mile are not at all out of line because a few of the roads have had a record of renewal of appreciably less than 100 ties per mile for several years. However, such records of limited tie requirements are legitimate only if they can be maintained year after year without a reduction in the average tie condition, and the record of low renewals for the last two or three years on most roads cannot be explained on the basis of reduced requirements.

Another noteworthy fact brought out in the tabulation is the number of roads that use all or an appreciable proportion of their ties untreated. Furthermore, a comparison of the separation as between treated and untreated ties in 1932 with the corresponding data for earlier years shows that a few of the roads treated relatively fewer ties in 1932 than in previous years and in one or two cases practically none at all.

G. H. MACKLEY has been appointed general manager of the New Zealand Government Railways, to succeed the late P. G. Roussell. Mr. Mackley, who had been acting general manager since the death of Mr. Roussell in November, 1932, entered railway service in 1900 as a cadet in the traffic department. He was subsequently promoted through several positions to that of assistant general manager in which latter connection he was serving at the time of his appointment as acting general manager.

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading in the week ended September 2 amounted to 666,652 cars, the highest for any week so far this year and an increase of 34,654 cars as compared with the preceding week. This was also an increase of 105,327 cars as compared with the corresponding week of 1932, but 93,219 cars less than the total for the corresponding week in 1931. The previous peak this year was the week of July 22, when 648,914 cars were loaded. All commodities except livestock and forest products showed increases as compared with the week before but livestock, grain and l. c. l. freight showed reductions as compared with the corresponding week of last year. Coal, ore and miscellaneous freight showed the principal increases as compared with last year. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

Revenue Freight Car Loading

Week ended Saturday, September 2, 1933

Districts	1933	1932	1931
Eastern	150,028	126,562	168,063
Allegheny	138,547	102,219	154,362
Pocahontas	49,700	38,051	49,068
Southern	88,662	83,268	104,217
Northwestern	99,734	72,870	111,457
Central Western	90,205	90,978	114,233
Southwestern	49,776	47,377	58,471
Total Western Districts	239,715	211,225	284,161
Total All Roads	666,652	561,325	759,871
Commodities			
Grain and Grain Products	32,407	40,486	38,248
Live Stock	18,586	18,598	22,533
Coal	140,365	105,429	133,019
Coke	7,365	3,440	5,152
Forest Products	25,456	16,424	27,943
Ore	40,245	5,989	35,155
Mdse. L. C. L.	171,832	174,345	218,286
Miscellaneous	230,396	196,614	279,535
September 2	666,652	561,325	759,871
August 26	631,998	537,767	763,551
August 19	634,845	518,440	748,600
August 12	622,759	511,965	743,626
August 5	613,112	496,626	734,730
Cumulative total, 35 weeks	18,885,823	18,666,647	25,795,595

The freight car surplus for the first two weeks in August averaged 403,257 cars, an increase of 10,352 cars as compared with the last half of July. The total included 229,501 box cars, 115,120 coal cars, 27,174 stock cars, and 11,635 refrigerator cars.

Car Loading in Canada

Car loadings in Canada for the week ended September 2 totaled 45,518 which was an increase of 3,997 cars over last year's total and an increase over the total for the previous week of 3,631 cars, raising the index number of the Dominion Bureau of Statistics from 68.32 to 70.15.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
Sept. 2, 1933	45,518	19,900
Aug. 26, 1933	41,887	19,525
Aug. 19, 1933	43,181	18,796
Sept. 3, 1932	41,521	17,313
Cumulative Totals for Canada:		
Sept. 2, 1933	1,264,302	636,781
Sept. 3, 1932	1,423,345	670,633
Aug. 29, 1931	1,680,320	912,454

TWENTY YEARS, NO FATALITIES.—This is the record of passengers carried in the trains of the Gulf, Mobile & Northern and its predecessor, the New Orleans, Mobile & Chicago. In this time (since June 3, 1913), the road has produced 254,222,438 passenger-miles.

General Electric Air Conditioning for Pennsylvania Diner

System incorporates a 5½-ton motor-driven compressor and a 20-kilowatt gear-driven generator which supplies all power requirements

By T. F. Perkinson and F. L. Sahlmann,
Transportation Engineering Department,
General Electric Company

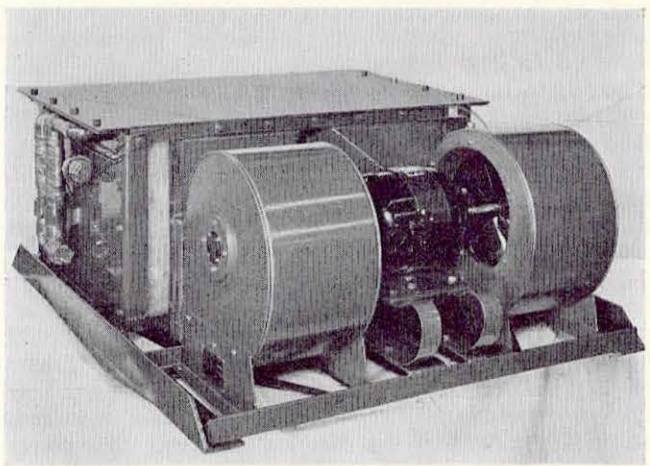
THE Pennsylvania Railroad has placed in service between New York and Washington a diner equipped with a mechanical air-conditioning system manufactured by the General Electric Company. This equipment is of the conventional type employing a direct-current motor-driven compressor, but it incorporates a number of novel features pertaining particularly to the power supply and the arrangement of the compressor and condenser units. It has a refrigerating capacity of 5½ tons of ice per day (66,000 B.t.u. per hour) and uses Freon as the refrigerant.

Another General Electric air-conditioning equipment previously put in operation on this railroad, in suburban service on the Paoli line, is of the hermetically sealed type, taking power from a 25-cycle trolley.

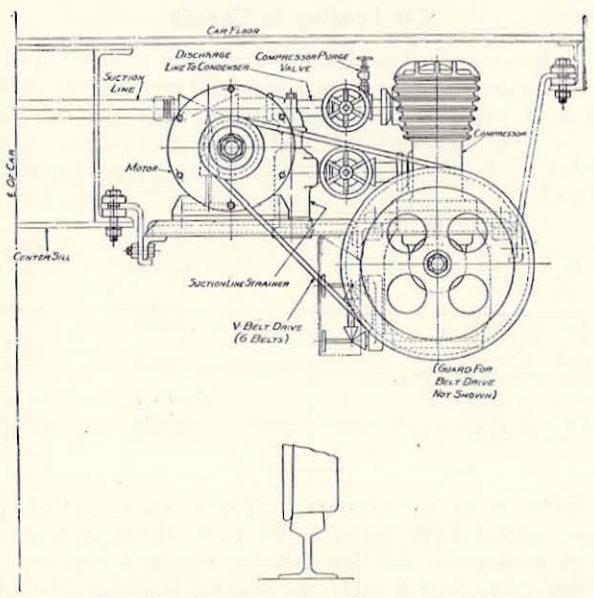
System Complete and Self-Sustaining

The equipment of the new conditioner consists essentially of one compressor unit located under the car body, one condenser unit located under the car body, two evaporator units located in the clerestory, one 20-kw. axle-mounted generator, and one control equipment.

The compressor, with the necessary valves, fittings, gages, etc., and its direct-current driving motor, are mounted in a framework suspended from the car underframe. The condenser, liquid receiver, condenser fan and fan motor are assembled in a framework independently of the compressor unit, and are also mounted beneath the car body. The air is drawn from the side of the car through the condenser, the circulation being such that no additional space is required at either end of the unit to secure an adequate flow of air irrespective of the direction of the car movement. Each of the two air-conditioning units in the clerestory of the car consists of an evaporator coil, a steam heat coil, expansion valves, circulating fans and fan motor mounted in a framework with the necessary ducts and piping. The equipment is suitable for operation with or without ducts. In this particular installation no ducts are used, the cooled air being discharged horizontally from a grilled opening in the bulkhead at each end of the car.



Evaporator Fan-Unit Assembly



Mounting Arrangement of Compressor Unit

All-Weather Control

The control consists essentially of a differential thermostat, the necessary contactors, resistors, etc., for controlling the operation of the various motors. The differential thermostat has been developed particularly for this application. It operates in such a manner that the outside air temperature modifies the action of the indoor thermostat to maintain the proper indoor temperature. This conforms in general to the practice recommended by the American Society of Heating and Ventilating Engineers. The thermostat controls the power supply to the compressor motor, which is either operating at full capacity or is shut down. The evaporator fans may be operated independently of the compressor unit. This permits operation of the air circulating fans for ventilation even though air conditioning is not required, and also permits use of this system for supplying makeup air during the winter season. Cold drafts are avoided during the heating season by temper-

ing the air by means of a steam heating coil in the evaporator unit.

The total volume of air circulated is approximately 2,000 c.f.m., a portion of which is makeup air drawn from openings in the side of the clerestory through filters by the fans and forced through the heating and cooling coils into the car. The air from the car returns to the fans through recirculating air openings in the ceiling near the blower set at each end of the car. With a system of this type the interior of the car is maintained at a pressure slightly above atmospheric. Because the incoming air is filtered, there is a noticeable absence of cinders and dust, since the movement of the air is outward from the car through cracks and door frames, around the windows, etc., instead of inward as in the case with the ordinary car ventilating systems.

20-Kw. Gear-Driven Generator

Of particular interest is the source of power supply. An axle-mounted, 20-kilowatt, 37½-volt, direct-current, shunt-wound generator, gear-driven from the inside axle of one of the car trucks, provides power for air conditioning, battery charging and lighting, and replaces the conventional car-lighting belt-driven machine.

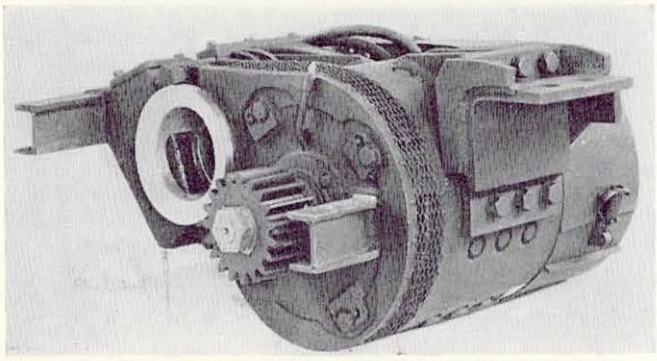
The generator has been designed to obtain the maximum capacity in the extremely limited space available in the truck. Fabricated construction, involving no castings of any kind in the generator frame, has been employed. The magnetic circuit is made up of rolled steel plate, the magnetic qualities of which permit working at higher flux densities than does the conventional steel casting, and with minimum physical size and weight.

A special axle to receive the generator and gear replaces the standard car axle. The axle bearings, of conventional bronze construction, are lubricated with oil and waste, oil being fed from a constant-level oil supply system, identical in principle to the system employed in recent years with General Electric traction motors. Antifriction bearings are provided for the armature shaft. The generator has a spring nose suspension for attachment to the truck frame and with a safety nose as insurance against the generator dropping to the track in the event of failure of the main suspension.

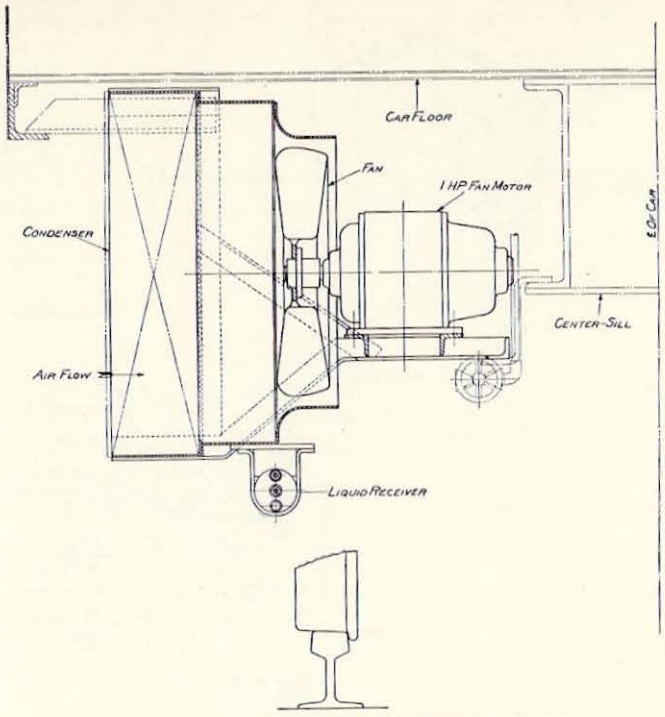
A Textolite pinion is used on the generator armature shaft to insure quiet operation. The pinion and axle gear are enclosed in a welded steel gear case containing the necessary lubricant, and which is readily removable for inspection or maintenance.

The gear mounted on the axle is of the "Safety" type, and is so designed that if for any reason the generator armature should lock or the gearing should jam, the axle is freed from the gear and continues to rotate without developing flat spots on the wheels, necessitating the setting out of the car.

The characteristics of the gear are such that it will not trip free by reason of any coupling shock which the car structure can stand, but will separate if the slipping point of the wheels is approached, as would occur with a locked armature. After an emergency operation the gear can be restored to normal operating status.



The 20 Kw. Axle-Driven Generator



Mounting Arrangement of Condenser Unit

Compressor and Condenser

To obtain the maximum of accessibility, the compressor and its driving motor have been mounted as a separate unit, distinct from the condenser assembly.

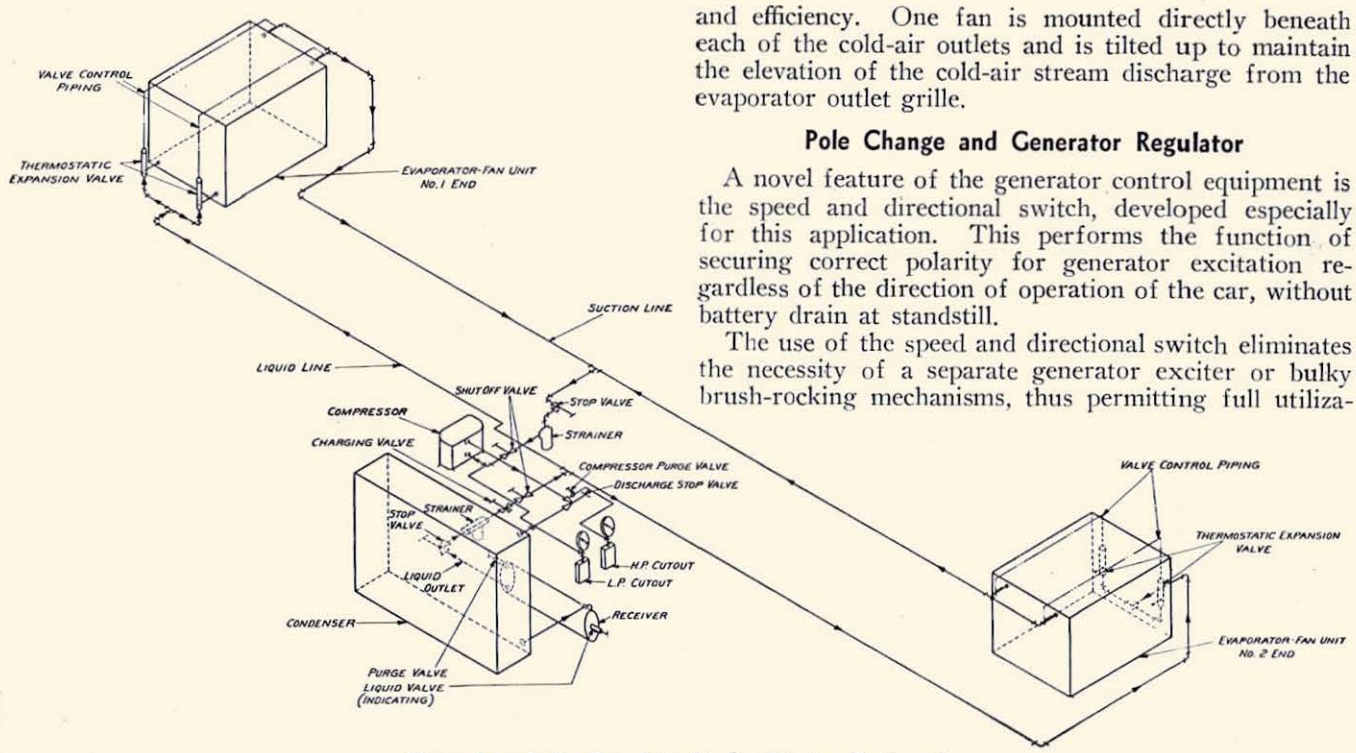
The compressor—a single-acting, two-cylinder, relatively slow speed machine running at 400 r.p.m.—is suspended at points near its center of gravity in a simple framework of structural shapes. The design of the framework is such that suspension from the longitudinal outside channel of the car underframe is employed. This arrangement not only provides easy access to all parts of the compressor and its driving motor but also permits addition of a minimum amount of weight in the form of supporting framework.

Drive between the compressor and the 37½-volt, 8-horsepower, direct-current motor is by means of grooved pulleys and endless V-belts, insuring a quiet yet simple and easily maintained drive.

Discharge and suction piping, valves, strainers, high and low pressure cutouts and gages are completely contained and interconnected within the dimensions of the framework, making it necessary to furnish but two refrigerant connections, the discharge and suction lines, to the remainder of the refrigerating system.

The points of support for the compressor unit are insulated from the car body by soft rubber bushings, thus minimizing the transmission of compressor vibration to the car structure.

The space available for the application of compressor and condenser equipment beneath the car underframe is, in the majority of existing rolling stock, very restricted. In particular is this restriction present in the case of dining cars, where this space is utilized to a large extent by provision boxes, battery boxes, brake equipment, etc. Very often the space available for the application of the compressor and condenser equipment is hemmed in on each side by existing boxes—a condition that aggravates the problem of obtaining adequate accessibility. In the installation of equipment for the Pennsylvania diner,



Piping Layout for Complete Air-Conditioning Equipment

the separation of the condenser unit from the compressor and its driving motor facilitates the problem of securing adequate location and accessibility to apparatus.

As with the compressor mounting, a minimum of framework is required to carry the condenser, its cooling fan, and the driving motor for the latter. Easy access to the fan motor for inspection and maintenance is obtained from beneath and behind the condenser.

The condenser fan, a 22-inch four-blade unit of special design for high efficiency and quietness of operation, is driven at 1200 r.p.m. by a one-horsepower, 37½-volt, totally enclosed, direct-connected, series-wound motor. The fan blades are of cast aluminum with non-resonant characteristics, a factor contributing largely to quietness in operation.

Evaporator Units Provide Year-Round Service

There are two evaporator units, one mounted in the clerestory space behind the bulkhead separating the dining salon from the galley, and one in the clerestory at the opposite end of the dining space. Each unit includes two sets of copper coils enclosed in a copper-fin assembly. One set of coils carries the refrigerant gas and furnishes the refrigerating effect for cooling the incoming air. The remaining set is connected to the steam heating system of the car and is employed during periods when heating rather than cooling is desired. Two thermostatic expansion valves are used on each unit.

A ⅓-horsepower, 37½-volt, series-wound motor drives two overhung centrifugal fans which supply 1,000 cubic feet of air per minute to each evaporator unit. The motor is mounted on a spring base which effectively prevents the transmission of vibrations and consequent noise to the car structure.

The conditioned air, as it leaves the evaporators, is assisted in its passage to the various parts of the dining salon by two small motor-driven deep-pitch bulkhead fans, comparable in size to the conventional type of railway car ventilating fans. They are of the three-blade type, not unlike a three-blade marine propeller in appearance, and are designed for maximum quietness and efficiency. One fan is mounted directly beneath each of the cold-air outlets and is tilted up to maintain the elevation of the cold-air stream discharge from the evaporator outlet grille.

Pole Change and Generator Regulator

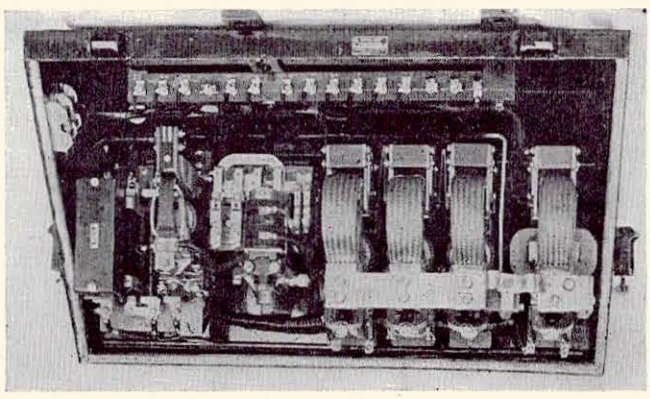
A novel feature of the generator control equipment is the speed and directional switch, developed especially for this application. This performs the function of securing correct polarity for generator excitation regardless of the direction of operation of the car, without battery drain at standstill.

The use of the speed and directional switch eliminates the necessity of a separate generator exciter or bulky brush-rocking mechanisms, thus permitting full utilization of the available space in the truck for power-producing purposes. Positive build-up of correct polarity is assured by battery excitation—flashing—of the generator field during the accelerating period. When the reverse current relay closes, the generator is self-excited. When the train speed is below approximately 10 miles an hour all excitation is removed by this switch, thus avoiding battery drain.

A carbon-pile regulator holds the generator voltage within a narrow voltage range between car speeds of 25 and 90 miles an hour. A current element on this regulator limits the current output to a safe value.

The generator and compressor motor control equipment, with the exception of the carbon-pile regulator and reverse current relay, is in a sheet metal box suspended beneath the car body adjacent to the condenser unit. The carbon-pile regulator and reverse current relay are designed to replace corresponding lighting generator regulator equipment commonly found in locker space on existing passenger-car equipment.

High and low pressure cutouts, mounted with the compressor unit, protect the refrigerant system from excessive and subnormal pressures by shutting down the compressor should abnormal conditions hold.



Control Group in Mounting Cabinet with Cover Removed

Eastman Inquires Into Company Unions

WASHINGTON, D. C.

STATING that the many complaints he has received lead him to believe that one important feature of the Emergency Railroad Transportation Act, 1933, that relating to company unions, "has been overlooked or misunderstood", and that he deems it his duty to see to it, so far as possible, that all provisions of that act are enforced, Co-ordinator Eastman has sent to all railroads subject to the act a comprehensive questionnaire of 53 questions designed to develop the facts with respect to this matter. In addition, and as a check, he expects, through his staffs, to make investigations of particular situations on the ground. Incidentally one of the questions refers to one of the origins of company unions, the special resolution passed by the Railroad Labor Board on July 3, 1922, after the shopmen's strike, suggesting that the employees in the maintenance of equipment departments remaining in service be organized for representation purposes in connection with future dealings with the board.

A letter accompanying the questionnaire points out that Section 7 (e) of the emergency act makes applicable to all railroads two paragraphs in the bankruptcy act, which in the latter act apply only to railroads operated by a judge or trustee, and that the result is that it is now unlawful for any railroad to:

(1) Deny or in any way question the right of its employees to join the labor organization of their choice.

(2) Interfere in any way with the organizations of its employees.

(3) Use its funds in maintaining so-called company unions.

(4) Influence or coerce its employees in an effort to induce them to join or to remain members of such company unions.

(5) Require any person seeking employment to sign a contract or agreement promising to join or not to join a labor organization. And if such a contract has been enforced, the railroad is required to notify its employees by an appropriate order that said contract has been discarded and is no longer binding on them in any way.

"It will be noted," Mr. Eastman says, "that these provisions do not prohibit any particular variety of labor organization, but they do give the railroad employees absolute freedom of choice in joining such organizations without coercion or influence of any description on the part of the railroad managements; and they prohibit the latter from using railroad funds to maintain any labor organization. In other words, managements must keep their hands off, so far as labor organizations are concerned.

"In the questionnaire I have included certain inquiries going to some extent into the history of the so-called company unions, in view of the fact that in connection with my research into the need for further legislation to improve transportation conditions throughout the country, Section 13 of the Act makes it my duty to consider the improvement of railroad labor conditions and relations."

It is requested, in accordance with Section 6 (a) of the emergency act, that each railroad "which maintains contractual relations with any organization of employees other than those railroad labor organizations which entered into the agreements of January 31, 1932, December 21, 1932, and June 22, 1933, covering wages, hours, working conditions and the handling of grievances," reply in full to the questions. If any railroad so desires it may offer a separate brief or memorandum in support or justification of any practices or policies in connection with the matters under investigation, disclosed by the answers to the questionnaire.

It is further requested that the replies be authenticated under oath and filed with the federal co-ordinator on or before October 1. The information called for includes, in addition to many other details, the following:

Set-Up of Company Unions

In what departments or branches of the service wages, hours, working conditions and the method for adjusting grievances are established by agreements with organizations of employees (hereinafter called company unions) other than those party to the Chicago agreements of January 31 and December 21, 1932, and the Washington agreement of June 22, 1933.

Whether or not the official headquarters of each company union are located on the property of respondent, and, if so, what if any rental is paid.

Names, titles, and addresses of all officers of respondent who are members of any company union, indicating in each instance the union and the kind of membership, whether regular, honorary, advisory, or otherwise described or limited.

Names, titles, and addresses of all officers of respondent who act in an advisory capacity to any company union, indicating in each instance the union concerned and by what authority they so act.

Are members of the supervisory force eligible to membership of any kind in any company union? Indicate whether they enjoy voice, or voice and vote in the deliberations of the union concerned.

Advise by whom and in what manner the original articles of organization or the constitution and by-laws of each company union were adopted or ratified.

Did respondent or any of its officers or members of supervisory force prepare or assist in the preparation of the articles of organization, or constitution and by-laws, ratified or adopted by any company union when first organized?

Does any agreement of respondent with any company union provide that the articles of organization, or the constitution and by-laws, and amendments thereto must first be submitted to management of respondent for approval before they become effective?

Company Union Procedure

In the selection of *local* officers and representatives, if any, of each company union, (a) Does respondent control or influence nominations? (b) Are elections held on company property? (c) Are they held during working hours and do employees vote on company time? (d) Does respondent in any way control or influence the local election? (e) Does respondent supervise or assist in the supervision of elections? (f) Does respondent furnish or pay for the ballots, in whole or in part? (g) Does respondent furnish any clerical or other assistance in the counting of ballots?

In the election of *system* officers and representatives of each company union, (a) Does respondent pay the expenses, in whole or in part, of delegates to a convention or other meeting? (b) Does respondent supervise or influence the selection of such delegates? (c) Does respondent pay for convention hall or other meeting place, or for similar expenses? (d) Does respondent furnish or pay, in whole or in part, for ballots, or lend other aid to the convention or other election proceeding? (e) If election of system officers is by system-wide ballot and not by convention, are elections held on company property? (f) Are they held during working hours and do employees vote on company time? (g) Does respondent furnish or pay for the ballots, in whole or in part? (h) Does respondent furnish any clerical or other assistance in the counting of ballots? (i) Does respondent furnish regular meeting places for the local branches, divisions, lodges or committees of any company union?

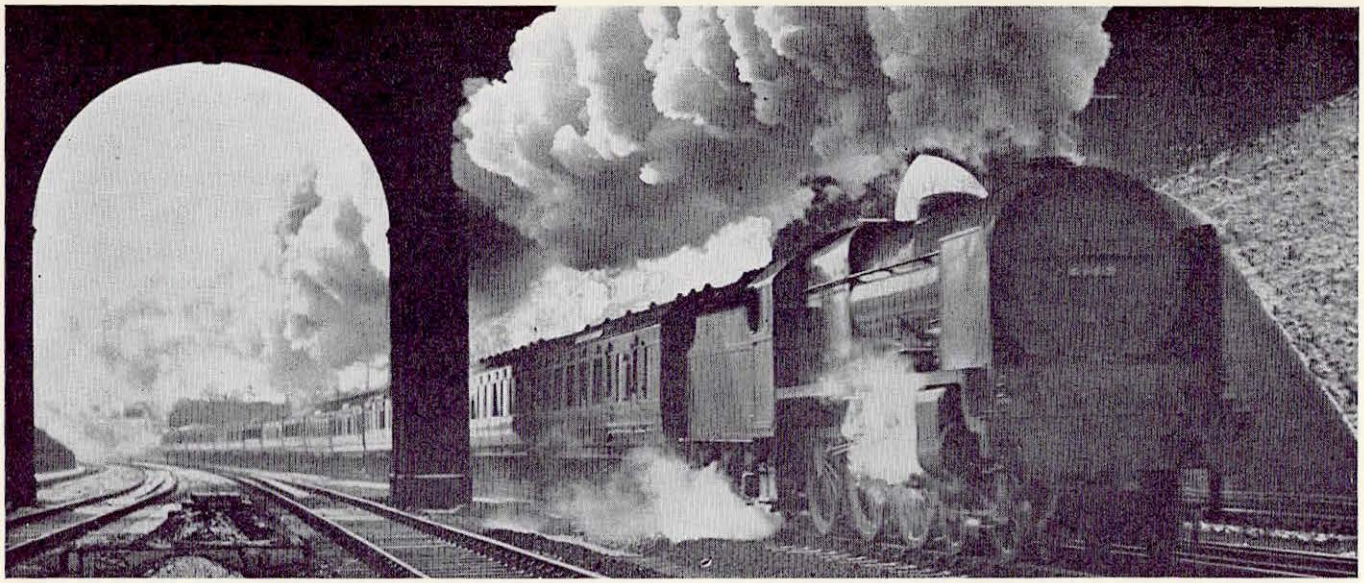
Company Union Membership

Is membership in any company union a condition of employment on respondent's railroad?

If membership is not a condition of employment are new employees when hired urged, advised or encouraged by employing officers to join such union or unions?

Do officers or members of the supervisory force of respondent

(*Continued on page 410*)



The L. M. S. "Royal Scot"—One of Many Anglo-Scottish Trains Accelerated During 1932

British Railways Forge Ahead

1932 decline met by sharp economies, pooling and greatly improved service which is strengthening competitive position

By C. S. Lock

Great Western Railway of England

WHATEVER the figures may show, other facts will prove 1932 a year of vital importance to the British railways. With revenue falling week after week; continued depression; the introduction of customs tariffs; unrestricted road competition and high wage costs, the companies turned to the only means left to them of effecting substantial and permanent economies by bringing into operation agreements for the pooling of receipts from competitive traffic. The vastness of these measures, involving as they do nearly half the gross railway revenues, and their ramifications, are such that it is not possible yet to foresee their full implication or ultimate effect upon the operating and organizational problems of the companies. Their potentialities however, suggest their being as vital to the railways as the grouping of all the companies into four systems, and although individuality will be retained, they trend towards railway unification.

Pooling Arrangements

The first scheme made known was between the London, Midland & Scottish and the London & North Eastern and affected 50 per cent of their gross revenue. Later two- or three-party pools were announced between the Great Western, the L. M. S., and the L. N. E. These pools cover every class of traffic, except mail, passing between competitive points and carried by the companies throughout, or by services operated in conjunction with other lines. After allowing for terminal and other operating charges, the pools are allocated to each company on the basis of average total receipts from affected traffics for the years 1928, 1929, 1930. The principal economies which it is hoped to effect are the avoidance of duplication in solicitation and advertising; the combination of streams of traffic over certain routes which are now spread over two or more, and the consequent elimination of train-mileage; the consolidation of terminal facilities; and the avoidance of duplication in capital expenditure.

The immediate result of their introduction was to give interavailability of tickets between places affected, thus doubling the train service available to the public while the removal of long standing limitations on running time provided accelerated passenger services. The speed-up of freight train services has untold possibilities which are now being actively explored.

Revenue and Economies

As will be seen from the figures issued by the Ministry of Transport and shown in Table I, revenue in respect of railway operation fell by six million pounds, the number of passengers by 37 millions and freight by 18 million tons.

Table I. Revenue and Traffic

(000,000 omitted)

	Receipts £	Expenditure £	Revenue Net £	Passengers Carried	Freight Tonnage
1931	170	137	33	1,156	268
1932	156	129	27	1,119	250

On the four main line railways, gross receipts declined by over fifteen million pounds, which was offset by economies to the extent of nearly nine million pounds,

a remarkable performance in view of the saving of thirteen million pounds of the 16½ million pounds decrease in the previous year.

This was achieved principally by reducing train mileage, though it was not possible to do so in the same ratio as the fall in traffic without endangering diversion of further traffic to the highways; by staff reductions, withdrawal of solicitors and closing of off-line agencies; by the withdrawal from service of surplus rolling stock, and the closing of freight and passenger stations affected by the pooling schemes.

The fall in revenue had its effect on stocks, new low levels being recorded as shown in Table II.

Table II. Prices of Stocks

	Highest in 1923	Lowest in 1932	Prices on Dec. 28, 1932	Div. Paid 1931	1932
G. W. R. Cons. Ord....	108⅜	22	33½	3	3
L. M. S. Ord.....	108⅝	9⅝	15	¼	..
L. N. E. Pref. Ord.....	89¼	5⅝	8¾	..	..
S. R. Def. Ord.....	43¾	5	10	..	..

Only one company—the G. W. R.—paid, with the aid of reserves, the required 3 per cent on its ordinary stock to retain its full trustee status. The last two years, therefore, have seen three of the four companies' stock, some 617 million pounds, fall from the trustee list, while in 1932, £300 millions of railway capital went without any dividends at all, and dividends on a large volume of preference stock were substantially reduced. In spite of this, however, the £5 million capital issue by the Southern Railway was over-subscribed and the lists closed within an hour.

Passenger Traffic

A feature of 1932 was the manner in which every channel of promoting, retaining or regaining passenger traffic was explored, December recording the first increase for several years. The wholesale extension of reduced rates continued so that nearly 90 per cent of the passenger traffic was carried at reduced rates.

Novelty trips made their appearance headed by the "Hikers' Mystery Express" run by the G. W. R. and which has been copied or extended with such good results throughout the world. The originality of the idea, the secrecy of destination even from the enginemen who received their instructions in a sealed envelope, as the train started, and the cheapness of the trip, attracted over 1,600 people—the train being run in duplicate. Sightseeing tours by rail; trips run specially for "kiddies" and provided with play rooms and clown entertainers were among the many other novelties arranged.

"Runabout" tickets, giving a week's unlimited travel at exceptionally cheap rates in holiday areas were extended to all the holiday districts. Dogs, perambulators and bicycles accompanying passengers were carried at the single rate for the round-trip, children's folding mail cars being carried free.

Period excursion tickets were made more elastic both in availability and days of issue. The most important change, however, which signified the passing of the "excursion" train, was the sweeping away of restrictions in regard to trains upon which tickets might be used, the whole of the ordinary train services, including famous named trains, being thrown open for travel at pre-war rates of a penny a mile. Buffet and cafeteria cars made their appearance and were rapidly extended and had it not been for these energetic methods the fall in passenger traffic would have been more severe.

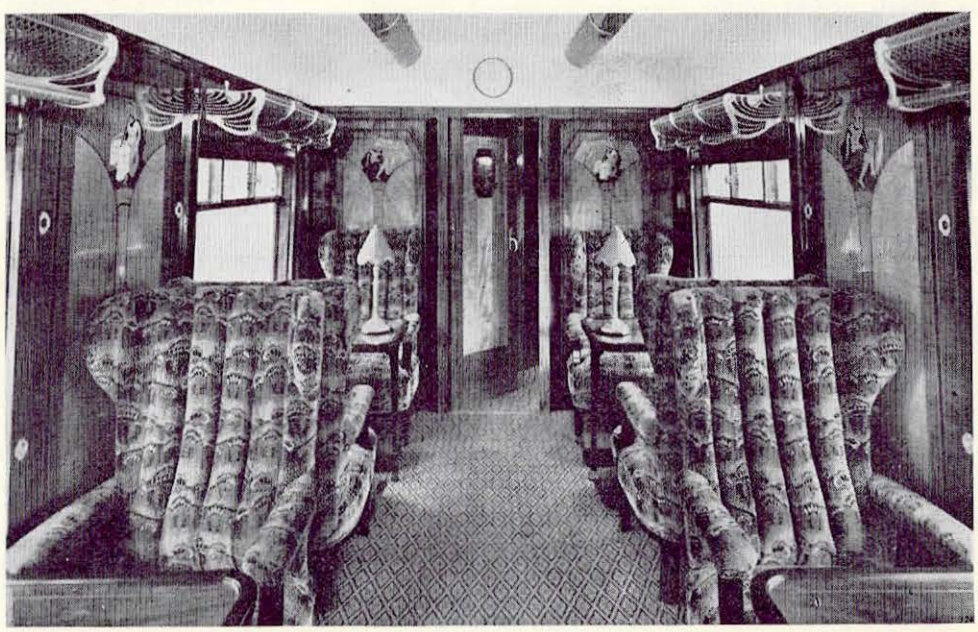
These extensions went hand in hand with the greatest acceleration of passenger services in the history of the railways, the summer services alone showing a daily saving of nearly 20,000 minutes in the journey time of trains. All services were affected; express, local and branch lines. Twenty-two expresses were booked at a mile a minute schedule or more, including the G. W. R. Cheltenham Flyer, whose average booked "start-to-stop" speed for the 77¼-mi. run between Swindon and Paddington was raised on September 12 last from 69.18 to 71.3 m.p.h. in consequence of a two-minute cut from 67 to 65 minutes in its schedule.

This is the first time in world railway history that a train had been scheduled at 70 m.p.h. or over, and how great still is the reserve of power was shown when on one day the journey was completed in 56 min. 47 sec., an average speed of 81.6 m.p.h.

Over 154 trains had "non-stop" runs of 100 miles or over, including the world's longest "non-stop" run, that of the L. N. E. "Flying Scotsman" between Kings Cross (London) and Edinburgh, a distance of 392¼ miles.

The acceleration of this train, the L. M. S. "Royal Scot" and other Scottish Expresses by 35-45 minutes, was the first outcome of the new pooling agreements and the modification of the old speed restriction agreement between the East and West coast companies.

The last day of the year saw the opening of Britain's



Interior View of One of the Southern Railway's New Pullman Cars Introduced with the Opening of Its Electrified Main Line to Brighton

first electric main line by the Southern Railway between London and the South Coast. The scheme has cost two and three-quarter million pounds, and added a further 159 miles of electrified track to the already extensive suburban system operated by this company. A feature of the new service is the set departure time of fast, semi-fast or stopping trains to Brighton and other points, and the construction of special rolling stock. This includes six-coach units, each of five corridor coaches and a Pullman, and five-coach all-Pullman units which are claimed to be among the most luxurious coaches in the world. The maximum speed of these trains is 75 miles an hour, the hourly "non-stop" service to Brighton, 51 miles, being covered in 60 minutes. The total mileage of electrified track in the country rose from 1,320 to 1,500 during the year.

Freight Traffic

Freight train receipts decreased by 13 per cent and coal traffic by 6 per cent when compared with 1931. This represented a decrease of some 18 millions in tonnage handled, most of which was attributable to the diminished production of the country, trouble with Ireland and the introduction of customs tariffs.

Increasing competition from road haulers was met by an all-round tightening schedule, the L. M. S. alone affecting a daily saving of 8,652 minutes in the time of its trains and varying from a few minutes to two hours, a remarkable achievement when the shortness of the hauls on the British railways and density of traffic is taken into account. There are over 200 express freight trains, mainly composed of vacuum-braked cars and high powered locomotives now running nightly throughout the systems, and affording next day deliveries at all principal places throughout the country. This is only the beginning of such accelerations, for the pooling agreements mean the recasting of the country's freight services, and open up an enormous field for the redirection of traffic over more advantageous routes, and the withdrawal of unproductive services.

Terminals were modernized, new classification yards constructed, railhead distribution and country truck services were extended, and the stock of containers increased from 6,000 to 7,000. These latter are now used for almost every conceivable commodity—including coal, for which they are now being tried experimentally by the G. W. R. This company is also operating a system by which urgent traffic may be registered through to destination, and which virtually guarantees date and time of delivery. The system embraces anything from a parcel to complete train and is proving an increasing factor in these days of speed.

The Great Western's Mystery Excursions Were Widely Copied—Here Is Mystery Express No. 1 Leaving Paddington Station, London

Railway Rates Tribunal

The annual review of standard and exceptional charges again found the companies unwilling to ask for an increase in rates having regard to the industrial and economic position of the country, and the doubt that any material financial improvement would result from such a course.

It was known, however, that in view of continued and unlegislated road competition and the resultant loss of high grade traffic—the companies were seriously contemplating an increase in rates on the lower classes in order to augment net revenue. Increasing advantage was, however, taken of their powers to quote immediately "exceptional" rates falling between 5 per cent and 40 per cent below the standard charges, and over half a million of such new rates were given during the last year. Much traffic was secured back to the rail by this means, though in some cases the charges barely covered operating costs.

During the year the companies developed a number of experimental schemes of charging the whole of the traffic of individual firms upon the basis of a flat rate, or unit charge per ton, over a given area. Experience proved that firms were demanding this form of quotation in preference to the application of numerous individual rates, according to the several destinations, that road haulers were prepared to offer such quotations and that by arranging such terms the company was able, in each case, to regain traffic from competing forms of transport, as well as to retain that portion of the firm's business already handled by rail, a condition of quotation being that the whole of the firm's traffic within the area concerned must move by railway.

Being more than 40 per cent below standard these rates had to be reported to the Rates Tribunal which at first sanctioned and recommended them, but later refused consent mainly on the grounds that such a quotation was not within the companies' statutory powers of charging the flat rate, not being an exceptional rate within the meaning of the Railways Act of 1921. The companies are appealing against the decision which debars them from quoting for traffic as road haulers may do without let or hindrance.

Tariffs

The introduction of customs tariffs occurred in November, 1931, shortly after the country went off the gold standard. The immediate and increasing effect was to restrict imports, and also exports as a result of restrictions imposed on British coal and goods by foreign countries.

The big fall in imports and exports seriously affected freight traffic moving to and from the ports—the companies suffering a loss of over three million tons alone at their own docks systems. In spite of this however, a vigorous program of dock improvements, not only for the handling of freight but also for ocean passengers liners, was carried out. At Southampton the Southern Railway has in hand a scheme involving an expenditure of eight million pounds and which will provide accommodation for, and a dry dock to take, the world's largest liners.

Foreign travel was also considerably curtailed and a number of cross Channel passenger boat and train services withdrawn. The Southern Railway suffered severely in this respect. Necessity however, is the

mother of invention and with the increasing popularity of sea cruising, railway steamers, many of which had only just been put into service, and which would otherwise have been laid up, were soon adopted and utilized to provide short week-end cruises in home waters and to the Channel ports.

Between November, 1931, and October, 1932, some 218 businesses previously carried on in foreign countries were established in this country, the majority of which were adjacent to the systems, and from which much traffic is expected. The customs tariffs, however, are certainly not good for the companies, and it is difficult to see how they may expect to recompense themselves for this continued loss.

Locomotives and Rolling Stock

There were no locomotive developments of importance. Falling traffic kept building programs to a minimum and many hundreds of locomotives were withdrawn from services and "tallowed down." Similarly with cars, thousands of which are now stabled in storage sidings. Passenger coaches continued to provide increasing comfort, but the tendency was, by simplifying construction, to lessen production costs. Experiments were continued with diesel-electric traction by the two Northern lines.

Road Services

By the end of the year the Associated Road Companies (in which the railways have a substantial financial interest) had absorbed the last of the passenger road services and vehicles previously operated by the railway companies. Interavailability of tickets was extended to many other points and connecting services are provided at thousands of stations throughout the system. This rail and road contact is proving of great public benefit and convenience which must increase with time and experience.

The £9,000,000 railway capital invested in highway concerns is yielding between 6 per cent and 7 per cent, in addition to which there are big savings from the withdrawal of unremunerative branch line services in favor of bus services run by Associated Companies.

On the freight side the railways' road operations followed a most progressive line. Almost every type of road haulage vehicle is now included in their fleets from the tractor-multiple-wheeled-trailer capable of conveying loads too wide for railway clearances, up to 50 tons in weight, to the latest addition, the 8 h. p. streamlined Baby Ford vans now in experimental use to afford delivery within a few minutes of arrival of individual consignment of fish, farm and dairy produce.

The companies are now in a position to quote for, and undertake, any transport and auxiliary service even to the sacking, weighing and the delivery of coal, while agents and station masters have power to quote a road rate immediately, without reference to headquarters, providing the traffic to be conveyed is to move entirely by highway.

In many cases the companies found it cheaper to dispense with the local cartage contractor and substitute their own services, while in London and hundreds of towns their existing services were adopted without appreciable additional cost so as to provide a town door-to-door carrier service—from which substantial additional revenue resulted.

Wages and Staff

During the year the number of employees fell from about 600,000 to 575,000. Retiring age, in wages grades, was lowered, and enforced in the salaried grades at 60,

An L. N. E. Buffet Car—Extended Use Is Now Being Made of These Cars on British Railways

men of 55 and upwards being allowed to go wherever possible. No new entrants to the service were taken on.

At the end of the year falling revenue forced the companies to approach the unions with proposals for an all-round 10 per cent cut in wages and salaries, which had risen from 47 million pounds in 1913 to 102 million pounds in 1931, or 117 per cent as compared with 66 per cent to 70 per cent in industry generally. This was estimated to effect a saving of £4,600,000, making £8,-260,000 with the present deductions.

Failing settlement with the unions the matter came before the National Wages Board—but as this also failed to produce agreement the companies intimated their intention of terminating the machinery set up under the Act of 1921 for settling such disputes. The existing percentage deduction of 2½ per cent on all earnings and a further 2½ per cent on earnings above 40 shillings per week or £100 per annum continued in force.

Rail-Highway Conference

In April, 1932, the long overdue rail and highway conference was appointed by the Minister of Transport. It was composed of four representatives each of the railways and of goods road transport interests under an independent chairman.

Briefly the terms of reference were:

1. What was the total annual road costs which should be borne by mechanically propelled vehicles as a whole, and how should that total be allocated among the different classes of vehicles.

2. What statutory regulations should be applied to the transport of goods by rail and road in the public interest, and

3. To determine the respective functions of rail and road for transport of goods with due regard to efficiency and economy.

This conference has its counterpart in the United States in the Joint Committee of Railroads and Highway Users except that it dealt only with goods transport.

The report was a masterly document. It was given within the stipulated time and was unanimous, a remarkable achievement in view of the divergent interests calling for give and take by both sides.

Its main findings were:

1. The annual cost of the roads to be borne by mechanically-propelled vehicles was £60 millions, to be allocated in the following proportions:

Commercial Goods vehicles, £23½ millions; all other mechanically-propelled vehicles, £36½ millions.

The former is about £2½ millions more than the present yield of license and petrol duties from goods

vehicles, and a revised scale of license duties was suggested by the conference. The report is still before Parliament with the likelihood that legislation will be enacted within the next few months.

Looking to the Future

The financial results of 1932 were not unexpected. No industry, least of all one on whom the nation depends for its transport, could hope to escape the ravages of the continued and unprecedented world depression; but few, if any, can show such outstanding endeavor and determination to adjust itself to changing circumstances, competition and modern needs as the railway industry has done during the worst financial year in its history, and which it has made but the stepping stone to greater efficiency, economy and enterprise.

Eastman Inquires Into Company Unions

(*Continued from page 405*)

interest themselves in the affairs of any company union and encourage or advise eligible non-members to join?

If possible, furnish copy of application for membership in each company union.

Have any officers or members of supervisory force of respondent, since the Emergency Railroad Transportation Act, 1933, became effective, cautioned or advised employees of respondent not to join organizations of labor other than the company unions recognized by respondent?

Have any officers or members of the supervisory force of respondent, since the Emergency Railroad Transportation Act, 1933, became effective, interviewed any employee or employees of respondent or conducted investigations of such employees to ascertain their intentions with respect to joining organizations of labor other than company unions?

Furnish copy of any circulars issued or bulletins posted by respondent, since the Emergency Railroad Transportation Act, 1933, became effective, for the purpose of interpreting to the employees the so-called labor provisions of this Act.

Furnish one copy each of contract of employment and all appendages covering any class or classes of employees of respondent who are represented by company unions.

Has respondent required any of its employees to sign any contract of employment or agreement promising to join a company union? If so, furnish typical copy of contract or agreement.

Has respondent required any of its employees to sign a contract of employment or make any agreement promising not to join a labor organization other than a company union?

In the event respondent has at any time in the past required any of its employees to sign any contract of employment or agreement promising to join or not to join a labor organization (company union or other) have these employees been notified by appropriate order or notice since the Emergency Railroad Transportation Act, 1933, became effective, and as required by said Act, that such contract or agreement has been discarded and is no longer binding on them in any way? If so, furnish copy of each such order or notice.

Company Union Finance

How does each company union raise the funds necessary to meet its operating expenses?

Does respondent or any of its officers or members of its supervisory force urge or admonish employees by letter or interview to pay their dues or assessments to any company union upon complaint of the officer of such union that employees are in arrears?

Does respondent or any of its officers or members of its supervisory force collect or assist in any way in the collection of enrollment fees, dues and assessments?

Does respondent now pay, in whole or in part, the salaries, traveling and living expenses of the system and regional officers or representatives of any company union?

Has respondent in the past paid, in whole or in part, the salaries and expenses of the system and regional officers or representatives of any company union?

Furnish statement showing total financial contributions, if any, made by respondent for each year since 1922 to each company union.

Wage Agreements with Company Unions

Submit one copy of the *original* agreement covering wages, hours, working conditions, etc., entered into with each company union.

Submit one copy of each of the *present* agreements covering wages, hours, working conditions, etc., entered into with each company union.

Give chronological statement showing changes made in each such agreement. Indicate under what auspices changes were made, that is, whether (1) by direct negotiation with representatives of company union concerned, (2) as the result of mediation, or (3) by award of board of arbitration.

Describe method or system in effect for handling the grievance cases of members of each company union (a) At point of origin (b) When appealed.

Have system boards of adjustment or joint reviewing boards been organized between respondent and any company union?

Origin of Company Unions

When company unions were first organized, did respondent or any of its officers request the employees in any department to form themselves into such company unions?

Were any requests of respondent to its employees to form company unions made in response to the special resolution passed by the United States Railroad Labor Board, July 3, 1922, suggesting that those employees of the maintenance of equipment departments remaining in the service of the railroads subsequent to July 1, 1922, be organized for representation purposes in connection with future dealings with the United States Railroad Labor Board?

In any department, class or sub-class of employment has respondent changed over from an agreement with any labor organization party to the Chicago and Washington wage deduction agreements referred to in Question 3 to an agreement with a company union at any time since 1920?

What outside services or agencies, if any, does respondent now employ to stimulate or maintain interest of employees in company unions and to encourage them to remain loyal and cooperative?

Has respondent or any of its officers engaged in any activities since the Emergency Railroad Transportation Act, 1933, became effective, seeking to induce, influence or coerce employees to retain their membership in any company union? If so, state nature of activities.

Has respondent at any time since the organization of any company union discharged any employee, directly or indirectly, for joining a labor organization other than a company union? If so, give names of employees and dates of discharge.

Have any employees so discharged since the Emergency Railroad Transportation Act, 1933, became effective, been reinstated?

Are Railways Capitalizing on Pullman Service?

(*Continued from page 398*)

low rate days each week averaged 156 per day while in August the number increased to 177 cars.

In brief, even the most casual investigation shows that the railways are regarding Pullman service more largely as an outside service than as a means of their own for increasing their own revenues directly through their proportion of the Pullman income or as an effective aid in securing traffic that they might otherwise lose. As a result, they are not adequately merchandising a service which they are offering and are losing income thereby. No better evidence can be asked than the number of sales which Pullman representatives are able to increase daily after railway employees have completed their sales. And this is only part of the story, for there is no way to determine how many sales have been lost to private automobiles or other agencies which might have been held on the rails by proper presentation of facts. The rails need to merchandise Pullman service more efficiently for their own individual advantage.

Communications and Books . . .

A Worker Asks for a Hearing

KENT, CONN.

TO THE EDITOR:

Your comment on "N. R. A. and the Railways," in the August 26 issue, does not give railroad men a break. You persist week after week in writing on our high wages. It is not true that even 25 per cent of the men get the 1929 wages less only 10 per cent. General forces, I know, have been working with Saturdays off—some roads four, others two—and a corresponding salary reduction. Section and shop men work so few days that they only draw from 30 to 60 per cent of their "1929 less 10 per cent" wages.

Many thousands receive between 55 per cent and 85 per cent of their 1929 wages. A good many of us had to drop to lower jobs when the higher ones were cut out. Is that not to be considered also?

Please give us a break. The Big Four may have a better general standard, but they do not comprise more than 25 per cent of the forces. Give us a square deal and publish this letter soon and tear it apart if you wish—but above all let the public *also* know that 75 per cent of the rank and file get a good deal less than the 1929 rates less 10 per cent—yes, sir, a good deal less.

Your persistent attack makes a lot of us wonder whether you feel that the executives being your main subscribers—and the rank and file only readers after the magazine is passed around—makes it necessary for you to side with their viewpoint.

Here's looking for a break and with best wishes for continued growth and success.

JOE STILES.

Can High-Speed Passenger Trains Justify Their Cost?

NEW YORK

TO THE EDITOR:

The air is full of proposals and conjectures for means to enable the railroads to recapture their lost passenger traffic. Serious consideration of this problem requires an appreciation of what the present competition is, and its probable future development.

Traffic up to and including 200 miles can be handled by the average man who owns an automobile (over the present highways) with safe speed—not the 70 and 75 miles usually referred to—and probably from house to destination in equal or better time than any practical railroad service, with the advantage of being able to start at any hour of the day or night he chooses.

When long haul passenger business is considered, the most lucrative field is that between New York and Chicago, including the several large cities between. Taking, merely as an example, the New York and Chicago traffic, aeroplanes to-day are making the trip in 5½ hours exclusive of the time lost between air field and destination. These trips are being made with increasing regularity, and while still considerably subject to weather conditions, this handicap is being steadily overcome through the use of automatic instruments and control, and it is probable they will become so accurate and reliable that flights can be made on at least 90 per cent of the days. It is also within the realm of present possibility to make this trip in four hours, and not impossible in the next few years to see it reduced to three hours.

As soon as the volume of traffic warrants, there are certain to be landing fields in the centers of the large cities, cutting out the delays to and from the air ports. Therefore it seems not unreasonable to anticipate within the next five years an hourly or two-hourly service in the air between these cities, with a schedule not to exceed four hours.

If these conclusions are sound, it appears that there is very little hope for the railroads to recapture any of this business, but the strong probability that they will lose much of what remains unless they can give some comparable service. This seems to require a train schedule between New York and Chicago not to exceed seven hours, and proportionately to intermediate cities. There is one way to accomplish this result.

The trunk line railroads between New York and Chicago, if intensively operated, are more than sufficient to handle present and prospective business for several years to come; therefore a combination of one double track main line between these two cities could be taken from regular railroad business, and the remaining lines handle all that offers without delay. These released tracks could be put in physical condition to handle high-speed streamline trains capable of maintaining an average speed of 125-150 m.p.h. in normal weather conditions, and reserved exclusively for such service; conversely, all this through passenger traffic would be taken off other roads.

High-speed trains require thorough and accurate streamlining; weight is of comparatively little importance, since the tractive effort required only varies directly as the weight, but as the square of the resultant velocity which is frequently higher than the train velocity. Comfortable, substantial trains handling 75 to 100 passengers, if properly streamlined, can be built at a reasonable figure to make non-stop runs on such track at an average speed between 125-150 m.p.h., and in this manner aeroplane competition can be met, and, I believe, in no other.

The question remains as to whether the portion of the traffic recaptured and stimulated would be sufficient to warrant the cost. Anything short of this does not seem to hold much hope.

SKEPTIC.

A Penetrating Discussion of the Railroad Sales Problem

ROSELLE, N. J.

TO THE EDITOR:

The article by F. J. Lisman in the *Railway Age* of August 5 admirably proclaims the need of suitable publicity for the railroads. The evident duty of claiming for themselves a fair and proper public attitude may be the determining factor in a return to sustained, healthy business, after the proposed reforms of operation and consolidation have been consummated. For many years the railroads have witnessed the rise of their competitors, almost entirely through the means of extensive advertising and its attendant and resultant general publicity. The public, forgetful of the true importance of the rails and of the advantageous service they offer, has not only closed its imagination to them, as Mr. Lisman truly asserts, but has come, through the extravagant claims of their competitors, to regard them as on the verge of desuetude.

There has been, during the great rise in popularity now enjoyed by the highway motor vehicles and the planes, little impetus for people to discuss rail service and operation. Most railroad publicity has been either competitive advertising among the roads themselves, or published financial statistics; very little as to what railroads really are, how they are operated, and what great underlying care is taken to obtain even the seemingly most casual results. On the other hand, every development in the motor world has the widest advertising. Each improvement is stressed—often over-stressed—, every change is heralded afar, and the public is bidden behold these wonders and see how they work. Consequently, through this mighty effort in advertising and the accompanying general publicity, most people are conversant with automobiles and planes. They discuss their parts and compare their points; they exaggerate their speed and gas consumption; they speak of the types of planes without having been in the air. It would be the easiest sort of task to find a man who could talk intelligently of an automobile he never even hopes to own, and who could not utter a syllable about the rudiments of operation of a railroad.

It is not surprising, then, to find that people regard railroads as obsolescent. Knowing little about railroads, they readily accept

motor transportation as an improvement because it is new and different. It satisfies their great desire for change. The changes brought about by railroads remain ignored more often than not, because a proper appraisal of their importance has not been demanded. The basic advantages of rail organization, which motor competitors never can attain, receive rare public consideration for this same reason. Users of transportation allow its more superficial aspects to form their preferences, because its fundamental principles have not been brought into clear public light.

A good idea of public opinion concerning railroads may be had by reference to articles about the roads of current writing. From them, we gather that the roads are slow and old-fashioned; that what the public wants is greater speed and the newest devices for obtaining that speed. We read that present equipment is too cumbersome and is lacking in comfort, and that the roads are lagging in their improvements while their competitors are marching on.

In this age of rapid pace there is, perhaps, no greater misconception than that of the true meaning of speed. We hear of the 200 m.p.h. pace attained by planes and of the automobiles that record an effortless 60 or 70 miles, but little enough of speed in its relative sense. The highly developed railroad organization appreciates speed only with its relationship to safety and punctuality. Speed loses its value when the traveler stands a 50 per cent chance of getting to his destination on time, or a 90 per cent chance of arriving there at all. The more highly developed we become, the more we depend on maintained schedules and the avoidance of accidents to produce the greatest efficiency in our lives. *Railroad speed is not intended to produce high records, it is the result of transportation specialization with a view to keeping schedules under all conditions. Contrary to popular belief, it is the highest efficient speed obtainable.* With constantly improved locomotives and with the adoption of streamed-lined motor trains, faster service will soon be here. The public has the assurance that such service will be consistent with the high standards of railroad operation.

No doubt the idea that the roads are old-fashioned is due largely to the prevalence of the steam locomotive. Since motor and electric services were developed subsequently to the steam, public opinion has relegated this mainstay of all large railroads to the scrap heap. People would be genuinely surprised to learn that the faithful old steamer has increased its efficiency more than their pet hobby, the automobile, during the past few years. They would also be surprised to hear that much of the seeming slowness of trains is due to its even operation and its ability to maintain faster schedules with a lower top speed. The efforts of designers and locomotive builders have given the steam engine an opportunity for a renaissance in public estimation. The necessary publicity to show its bearing on improved transportation would bring this about.

The present heavy equipment of the roads is due in large degree to the public clamor, not so many years ago, raised in behalf of safety. In those days, fatalities in railroad accidents stood without benefit of comparison to other modes of transportation. To-day, the chaotic condition of the highways, with its voluminous record of deaths and injuries has made the railroad accident seem so rare that people have dismissed its possibility from their minds. The slaughter of the highways has blunted their sense of precaution, as it has destroyed their sense of responsibility.

No fair comparison could find rail travel deficient in comfort. This quality is not found solely in any type of bus seat or individual contrivance. Comfort, as is the matter of speed, safety or any prerequisite of good transportation, is best produced through the efforts of a well organized system. The railroads' offerings of not only good seating, lighting, ventilation and lavatory facilities in their cars, but also of excellent terminals, smooth roadbeds, and even, skilled driving of their locomotives place them far ahead of their competitors in this regard. Public appreciation of rail comfort has been lacking, because people have not been told where to look for it.

Rapid industrial change and multiplicity of inventions have, in recent years, made the roads seem rather backward. No doubt, this is partially due to their conservative policies. But, on the other hand, the exacting requirements of railroad operation prevent the adoption of that large share of progressive change which is partially sound. Good railroading permits of no ephemeral gadgets or faddish gimcracks. Most of the progress that the roads have made has been that which necessitates familiarity with them in order to appreciate it. Improved steam locomotives, new types of rails, better signals, automatic train control, numerous improvements in the handling of freight at terminals all have a direct bearing on better freight and passenger service, yet they are not appreciated by those without some insight into railroading. The public will be responsive to motor trains, aluminum-alloy cars and other obvious changes in rail service for a time, but a proper valuation of these will not be obtained, unless there is a fair valuation of the organization that will have produced them.

The roads have at last come to the point where they realize themselves in a highly competitive business. In this competition, their competitors have expanded beyond their true spheres of usefulness. A large part of shipping and travel is a poorly organized, undisciplined scrambling. The need for public education concerning transportation is apparent. Why not an educational campaign to reveal the true values of transportation through familiarity with its really professional agencies, the railroads?

A campaign of this sort, with the joint participation of all Class I roads, would achieve wide publicity without excessive cost to each participant. Its material would be practically unlimited. Its copy would, of necessity, be written by those with a sympathetic understanding of the railroads. Pictorially, it would be revealing and compelling. There would be no place in it for trashy, quick-selling arguments, nor for dubious claims. The dignity of the roads forbids that. A simple, clear exposition of railroading—not too technical, yet technically sound—would reveal a whole new subject to great numbers of people, and would turn the thoughts of a nation to a rightful pride in one of their finest institutions—their railroads.

With the revival of business, the railroads will change considerably. Further co-ordination of plane and motor service will make them more available. Changes in equipment and the introduction of motor trains will make for faster service, and, to some extent, change the mode of travel. Freight will have a speedier delivery. But, whether these results are achieved by steam, electricity or oil, or whether rails, roads or air are used to effect them, the ability and life-long devotion of railroad men will bring them about through the profession they have created.

WILLIAM F. MAHNKEN, JR.

New Book

Universal Directory of Railway Officials and Railway Year Book, 1933-34. Compiled from official sources under the direction of the editor of the Railway Gazette (London). 566 pages, 8½ in. by 5½ in. Bound in cloth. Published by the Directory Publishing Company, Ltd., 33 Tothill Street, Westminster, London, Eng. Price, 20 shillings.

With this, the thirty-ninth edition of the Universal Directory of Railway Officials, there has been combined another old-established British book of reference, the Railway Year Book, the thirty-fifth edition of which appeared in 1932. In previous years, the publisher points out, the two publications to a certain extent overlapped, particularly in their lists of railway officers. The Railway Year Book was devoted mainly to information concerning railways of the British Isles, whereas the outstanding feature of the Universal Directory of Railway Officials was its comprehensive list of officers of railways throughout the world. The present volume is therefore designed to incorporate "the most useful features of both publications, as well as much additional information." The lists of railways and railway officers remain, brought up to date. Each of the leading railways of every country in the world is briefly described with the latest financial results, statistics and a directory of its officers. Shorter paragraphs deal with each of the smaller railways. Following this, there come 83 pages of statistics and other information, including articles on such subjects as steam, electric and diesel traction, the steam locomotive, passenger coaches and freight cars, roadway and track, British railway signaling, and noteworthy British railway accidents.

For convenient reference, the volume includes four indices as follows: The index to countries; the index to statistical and other information; the index to railways; and the index to railway officers.

NEWS

"Ship by Rail" Officers Hold Parley at Chicago

Delegates representing 26 state leagues compare notes and hear instructive talks

A meeting of officers of state associations of railroad employees and other citizens interested in securing equality of regulation and taxation among the several forms of transportation was held in Chicago on September 6-8 under the auspices of the National Advisory Council of the Railroad Employees and Taxpayers Associations. There were approximately 80 delegates in attendance representing some two million members of 26 separate state associations. The delegates gave detailed reports of competitive and legislative conditions in their respective states and heard addresses on several subjects bearing upon their interests, among which were: The St. Lawrence Seaway Project, by Samuel Botsford, executive vice-president, Buffalo (N. Y.) Chamber of Commerce; the Burden of Governmental Waste and Excessive Taxation, by W. R. Lence, managing director, Louisiana Taxpayers Association; and the Interest of the Business Man in Fair Competition in Transportation, by Paul V. Scheunemann, traffic manager, Monarch Elevator Company, St. Paul.

A resolution was adapted pledging the co-operation of the body with the Federal Co-ordinator of Transportation in his efforts to formulate a program for bringing the transportation industry out of the chaos into which it has fallen by reason of the inadequate regulation, low wages and subsidies characteristic of the railways' competitors. George L. Phillips, locomotive fireman for the Kentucky & Indiana Terminal, Louisville, Ky., presided at the meeting in his capacity as chairman of the National Advisory Council which called it.

"The state associations which co-operate with our National Advisory Council," said Mr. Phillips in a statement, "are variously named and pursue their objectives in the light of local conditions in their various states. We are not contemplating the formation of any national association at this time. In the Northwest most of our constituents' leagues are known as 'ship by rail' clubs and their membership is largely confined to railroad employees, as it is also in the Southeast. Elsewhere, however, the railroad employees form only a fraction of the membership—the bulk being made up of business men, farmers, professional men and others who believe that the day has come when the taxpayers can no longer afford to pay shippers' freight bills and who believe that all forms of commercial transportation should be made self-supporting as the railroads are."

"The purpose of our meeting," he continued, "is to hear reports from the several state associations as to their progress in obtaining desirable legislation at recent sessions of the state legislatures—since many of them did secure such legislation. Also we want to hear to what extent existing laws are being enforced and to consider what further legislation is needed to protect the railroad employees and the taxpayers against further loss of employment on the one hand and waste of tax money on the other upon an unneeded and unjustifiable expansion of our national transportation plant."

"We are not," he added, "seeking any unnatural advantage for the railroads, nor any artificial handicaps for their competitors. All we desire is approximate equality in regulation, in conditions of labor and in the degree of self-support for all forms of transportation. Under such conditions traffic will find the most economical channel and will flow through it. There is a place for the bus and truck, for the waterway and for the airline, as well as the railroad. All of them will benefit if the cut-throat competition which we are combating is definitely ended."

M. & O. To Continue Reduced Fares

The Mobile & Ohio has applied to the Interstate Commerce Commission for the necessary authorizations to enable it to continue its experiment with two-cents-a-mile passenger coach fares for an additional period of six months.

Associated Traffic Clubs

The annual meeting of the Associated Traffic Clubs of America will be held at Baltimore, Md., on October 24 and 25. The program includes addresses by Joseph B. Eastman, federal co-ordinator of transportation; Daniel Willard, president of the Baltimore & Ohio; and Roger Lapham, president of the American Hawaiian Steamship Company.

Express Agency Leases Space in N. Y. Inland Terminal

The Railway Express Agency has leased a section of the Union Inland Freight Station, which is located on the lower floors of the Port Authority Commerce building, New York City. The Express Agency lease was executed with the Railway Board of Managers of the terminal and involves the rental of 5,000 sq. ft. of platform space on the first floor of the building's fifteenth street side.

Eastman Investigates Truck Transportation

Co-ordinator sends questionnaire to about 16,000 operators of highway fleets

Stating that an important duty which he has under the emergency transportation act is the investigation of the relation of motor trucking to freight transportation, "the primary purpose of which will be to determine the sphere in which the transportation of goods by motor vehicle is more economical or serviceable than by other means of transportation," Joseph B. Eastman, federal co-ordinator of transportation, has sent a questionnaire to about 16,000 operators of motor truck fleets calling for voluminous basic data relating to truck operations, both private and for hire, the character and extent of traffic handled, the charges of trucks operated for hire, nature of the service performed, and expense statistics of motor truck operation.

This questionnaire has been prepared jointly by the Section of Research and the Section of Transportation Service. The investigation has been extended beyond the field of for-hire vehicles to include private operators of ten or more vehicles who transport their own goods, as it is recognized that such transportation is of growing importance and facts relating to it must be obtained before any sound transportation plan can be devised.

The co-ordinator hopes that truck operators generally "will avail themselves of this opportunity to assist the government in its recovery program and at the same time serve their own interests to the extent of furnishing the information requested," which will be treated in the strictest confidence without disclosing the business secrets of any firm or individual.

The co-ordinator's staff is now engaged in tabulating returns to other questionnaires recently sent out to a selected list of shippers and receivers of merchandise, industrial traffic managers, railroads (both steam and electric), forwarding and express companies.

The questionnaire calls for information as to the financial control, character of operation, character of traffic, principal routes or runs, terminal expense, tariffs and rates, loss and damage, credit, kind of equipment, service, revenues and expenses, depreciation charges, average number of employees on pay roll in 1932, wages paid, capital investment, unit operating statistics for 1932 for a cost study, and detailed annual operating costs per vehicle.

Principles and Practices for Freight Claim Agents

Code adopted by Freight Claim Division of the American Railway Association

The Freight Claim Division of the American Railway Association has adopted a code of principles and practices for the investigation and disposition of freight claims which will result in more uniformity in practice among the carriers and bring about more thorough supervision of claim settlements. The code became effective on September 10 and applies to all freight moved on and after that date. It is to be observed by all member carriers in the investigation and disposition of freight claims, local and interline, and no claims are to be paid contrary to it except on the written advice of the general solicitor of the paying road.

The purposes of these principles and practices are to obtain uniform treatment of all claimants, to secure and preserve harmonious relations among carriers and between carriers and their patrons and to maintain prompt and efficient service.

Article No. 1 provides that claims must be filed in writing with the receiving or delivering carrier or carrier issuing the bill of lading or the carrier on whose line the alleged loss, damage, injury or delay occurred, and that a claim for loss, damage, injury or delay shall not be paid unless filed in writing within the time limits and as otherwise required by the contract terms and conditions of the bill of lading or other contract of carriage. Article No. 2 provides that claims should be prepared on the standard form for presentation of claims to facilitate their investigation and disposition. The paying carrier shall require from the claimant evidence to show the right of the claimant to file the claim and collect for the loss, damage, injury or delay sustained. Article No. 3 provides that a claim for damage to a shipment inspected at destination by an authorized carrier inspection bureau shall be adjusted with respect to physical damage for which carriers are liable, on a basis not exceeding the damage certified to in the reports issued or concurred in by such inspection bureau. Article No. 4 provides that a claim for deterioration resulting from improper refrigeration, ventilation or application of artificial heat, negligent delay or other alleged mishandling or causes shall be adjusted in accordance with the facts developed by investigation and the condition of the property as certified or concurred in by the authorized carrier inspection bureau at the final destination. Article No. 5 provides that a claim for proved damage due to carriers' negligent delay shall be adjusted in accordance with the condition of the property as certified or concurred in by the authorized carrier inspection bureau at the final destination, and when the transportation record develops negligent delay by carriers and delay also on the part of the shippers or owners, the claim shall be adjusted in an amount not in excess of the carrier's proportion ascertained by using delays as factors. Article No. 6 provides that a claim for damage based on the examination of property under load and at intermediate points shall be adjusted only on the basis of damage ascertained at the time of delivery at the final destination, regardless of any change in ownership of the property. Article No. 7 provides that for the purpose of arriving at the correct measure of liability where the destination value of the property is a factor, any recognized market quotations at the destination or point adjacent thereto, quoting commodity values in the quantity shipped may be accepted. Article No. 8 provides that if the investigation of a claim develops that another carrier has been presented with a claim on the same shipment, the carrier investigating the claim shall communicate with such other carrier and an agreement shall be reached as to the proper disposition of such claims. Article No. 9 provides that a claim filed against the receiving or delivering carrier or carrier issuing the bill of lading or the carrier on whose line the alleged loss, damage, injury or delay occurred, which has been investigated and disallowed and subsequently refiled with the carrier other than the one with which it was originally filed, may be accepted, but no adjustment shall be made unless the entire responsibility for loss, damage, injury or delay is located with the carrier so paying, or with another carrier which authorizes the payment, or when objection to the payment is waived by the carrier to which the claim was originally presented, or when the payment is made as a result of a judgment on the claim by a court of competent jurisdiction.

Authorized to Reduce Fares

Receivers of the Cincinnati & Lake Erie (electric road) have been given permission by the Public Utilities Commission of Ohio to reduce passenger fares approximately 50 per cent on the Cincinnati-Dayton division, as an experiment, from September 10 to December 31. Should the lowered rates result in increased business, it is proposed to extend the new schedule to other divisions.

Canadian Pacific Low-Rate Excursions Popular

Approximately 6,000 excursionists have visited Vancouver, B. C., since fares of approximately one cent a mile were put in effect on August 18 at Canadian Pacific stations between Fort William, Ont., and the Rocky Mountains on trips to points on the Pacific Coast. The first contingent of those who took advantage of the low fares numbered 1,400 and the traffic has continued heavy since that time. While the Prairies-to-the-Coast travel for the period of 14 days proved popular, the Coast-to-the-Prairie excursions to stations between Lake Louise-Banff and Port William-Fort Arthur were patronized to a lesser extent, only 400 patrons taking advantage of the offer.

On September 1, the Canadian National, which also gave the low rate, moved a train of 26 passenger cars from Vancouver, including five special cars carrying golfers to the Canadian National Totem Pole golf tournament in Jasper and a large number of prairie excursionists returning on the cent-a-mile fare.

Proposed Code of Highway Freight Association Filed

Stated purposes, among others, are to eliminate unfair practices and stabilize industry

The American Highway Freight Association has formally submitted to the National Recovery Administration its proposed code of fair competition for for-hire trucking, stated as being intended for the purpose, among other things, of "eliminating unfair trade practices and establishing fair prices for services so that the industry may be changed from a condition of impairing its capital to the condition of stabilized earnings with just and reasonable profit enabling it to establish more regular employment of labor," and "otherwise rehabilitating the industry."

The proposed code states that the industry on behalf of which it is filed consists of the carriage of property for hire by means of motor vehicles, teams, and drays, and includes the owner of a truck or dray who leases it or hires it out to another industry but who retains any responsibility for the safety of the property transported, or who, by any arrangement, leases or hires it for the purpose of evasion of the provisions of the code. It also includes persons such as truck terminal operators, agents, brokers, or forwarders who solicit or offer to procure or provide transportation, and the owner of vehicles who engages in transportation for hire and performs labor in connection therewith though he may not employ anyone else in such operation, or any carriage of property by a member of any other industry who engages in carriage for hire for others than himself. However, it is provided that these provisions shall not be construed as applying to any farmer who transports his own farm products or supplies in vehicles of his own ownership and who occasionally may accommodate a neighbor by the haulage of similar goods for such neighbor, nor to transportation by a member of another industry from one company to another under a common control and management for which there is made a charge by a subsidiary to a parent company or vice versa, nor to a member of those industries engaged in the production, processing, or selling of goods who may perform the transportation in his own vehicles, making two prices, one based on origin and the other upon destination.

Provision is made by which all engaged in the industry shall register themselves and their operations with one or more local administrative agencies of the American Highway Freight Association in each state in or through which they operate.

The code would make it the privilege of any natural division of the industry, whether by territory or class of operations, to engage in voluntary agreements upon rates, and rules and regulations affecting rates, the machinery and method to be employed in such activity to be determined by such natural division with the approval of a Central Committee of the Industry and of the National Recovery Administration. Such agreements when

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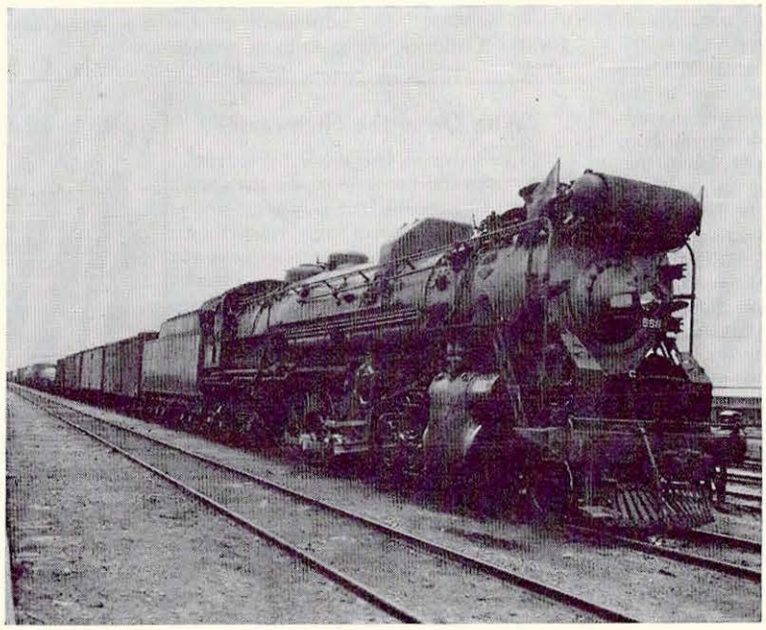
THE LOCOMOTIVE IS THE "BREAD-WINNER"



• In the competition for railroad capital expenditures, more spectacular projects often shove new motive power into the background.

• The locomotive is the starting point of operating economy.

• New power is hauling 50% more tons on 33⅓% less fuel than is the average freight locomotive now in service.

LIMA LIMA LOCOMOTIVE WORKS INCORPORATED OHIO

approved would become fair trade practices for such natural division of the industry and constitute parts of the code. The provisions of the code would in general be administered by the American Highway Freight Association through its board of directors, with the aid of state or regional committees organizations, or associations.

The general provisions as to hours of employment and wages are stated in Appendix No. 1, which states that the maximum hours for drivers, operators, helpers, mechanics, repair men, billing and rate clerks, terminal and station labor shall be 48 hours in any one week, "but, in consideration of the special conditions connected with this industry, the maximum hours of labor may exceed the maximum set forth herein for any one week, provided, however, that in such case the average number of hours per week for any three months period shall not exceed the maximum of 48 hours per week—208 hours per month, and, provided, that when any employee working on the basis of 48 hours in any one week—208 hours in any one month, shall have worked consecutively including meal periods for 16 hours, he shall not again resume work until a rest period of a minimum of eight hours has been taken." It is further provided that an employee riding on trucks or drays will be deemed in course of employment whether engaged in driving or other labor or not unless he is in a properly designated sleeping compartment. There is also another provision that the maximum hours pay be adjusted to conform with maximum hours of different competitive agencies of transportation under the supervision of the Interstate Commerce Commission or other government regulatory bodies. The minimum wage is placed at $16 a week unless the weekly rate for the same class of work on July 15, 1929, was less than $16 a week, in which case the rate in effect on that date shall be the minimum, and in no case less than $12 a week in the South and $14 a week in the North. This is to be guaranteed minimum rate except for temporary employees who are to be paid not less than 25 cents an hour in the South and 30 cents in the North.

An appendix proposed to be applied to the industry in the states of Oregon, Washington, Idaho, Montana, and Utah, provides that all persons operating under the code shall install such simplified uniform system of accounting as shall be inaugurated by the proper authority as determined by the Northwest Regional Committee. There is also a provision that the Northwest Regional Committee may enter into agreements with other transportation agencies such as the railroad and express companies and boat companies as to practices or minimum rates. Another appendix proposed for the New England states contains a provision declaring it to be an unfair method of competition for employees of railroads, express companies, steamship lines, or forwarding or carloading companies to solicit business for transportation by truck operated directly or indirectly by them or by any subsidiary, "wherein the element of cost for such solicitation is not included in the cost of such transportation."

As submitted the code contains no provisions as to wages above the minimum. The appendix for the Northwest region also contains a statement that the provision of maximum hours shall be considered as fully complied with if a line-haul operator shall not drive a vehicle for a distance in excess of 1,200 miles in any one week. It provides for a minimum of 45 cents an hour for drivers and vehicle operators and their helpers. The New England appendix provides for 52 hours a week, with exceptions contingent upon emergencies and acts of God, with time and one-third for hours in excess of 52, and a minimum of 40 cents an hour for drivers.

"Locomotives at Work"

From September 18 to October 15 about 100 water colors, etchings and drawings of old and modern locomotives by Otto Kuhler will be on exhibition at the Schwartz Galleries, 507 Madison avenue, New York. Mr. Kuhler, who is one of America's foremost industrial artists, has dramatized the steam locomotive in its familiar setting with accuracy of detail and sympathetic understanding. Reproductions of a number of his etchings and drawings have appeared in the *Railway Age* from time to time.

Who Owns the Highways?

"Crowded into the ditch by a truck driver who did not stop to see the damage he had done," is the way most news stories of fatal accidents read these days. The first page yesterday told of the capture and confession of a truck driver who sideswiped a car near Wakarusa, Ind., the other day, killing six people, whereupon he stepped on the gas and fled into Chicago. Just a day or two before, the papers told of a careless truck driver hauling a cargo of guncotton, colliding with a picnic party, killing 4 and wounding 26, when 40 cans of the high-powered stuff exploded following the wreck.

All of which impresses on the public the importance of the question: Who owns the highways, anyway?

Legislation to regulate trucks on the highways meets opposition in the various legislative assemblies, usually on the ground that it will interfere with the farmers doing their trucking. This is a lot of bunk put up by the big trucking outfits. No such legislation is designed to interfere with farmers hauling their own products to market or moving supplies from town or city to the farm. The attempted legislation is designed to regulated commercial trucking companies which endanger life and property, tear up the highways and pay little or nothing to keep up the right-of-way which the public furnishes them.

Who owns the highways? The people of the United States, but the trucking companies have taken possession of them and they dare the people to do anything about it; they dare the state legislature to reach them in any way; they dare the officers of the law to catch and prosecute their drivers; they dare anyone to sue them for damages. Some day we are going to wake up. Trucking on the highways has become a racket and nuisance, a menace to life and property.

An editorial from The Independent, Butte, Mont.

R. F. C. Requests Appointment of Burgess as C. B. & Q. Trustee

Representatives of the Reconstruction Finance Corporation, in the Federal Court at Chicago on September 12, requested the appointment of Kenneth F. Burgess, an attorney in private practice and formerly general solicitor of the Chicago, Burlington & Quincy, as an "impartial trustee" of the road. They also asked that all outstanding contracts of the railroad be reviewed by this trustee and that he immediately formulate and present a plan of reorganization.

N. E. Shippers' Advisory Board

The New England Advisory Board will hold its annual meeting at the Hotel Kimball, Springfield, Mass., on September 28 and 29. The usual reports of committees with estimates on freight traffic for the next three months will be presented. At a joint dinner of this Board and the Springfield Traffic Club on the evening of the 28th, the principal speaker will be Joseph B. Eastman, federal co-ordinator of transportation. M. J. Gormley, president of the American Railway Association and W. C. Kendall, Car Service division chairman, are expected to be present.

Gulf, Mobile & Northern Completes Acquisition of N. O. G. N.

The Gulf, Mobile & Northern, on August 15, leased from the New Orleans Great Northern for a period of 99 years all of the properties of the New Orleans Great Northern, including the terminal properties at New Orleans. This terminated the N. O. G. N. receivership which began on November 7, 1932. Already the two roads were operated by the same organization but henceforth the G. M. & N. will operate the two in its own name, the N. O. G. N. becoming the Louisiana division.

Water Carriers Propose to Form Co-Operation Committees

General Thomas Q. Ashburn, president of the Inland Waterways Corporation, has called a meeting of representatives of common and contract carriers by water to be held in Washington on September 20, with a view to organizing committees corresponding to regional railroad committees, together with an executive committee, to deal with similar railroad committees for the purpose of promoting stability of rates and discouraging destructive competition, along the lines discussed at a meeting last week with Joseph B. Eastman, federal coordinator of transportation. Representatives of water lines have also held conferences with William H. Davis, deputy administrator of the National Recovery Administration, regarding proposed codes relating to trans-oceanic, intercoastal, coastwise, Great Lakes, and inland water-

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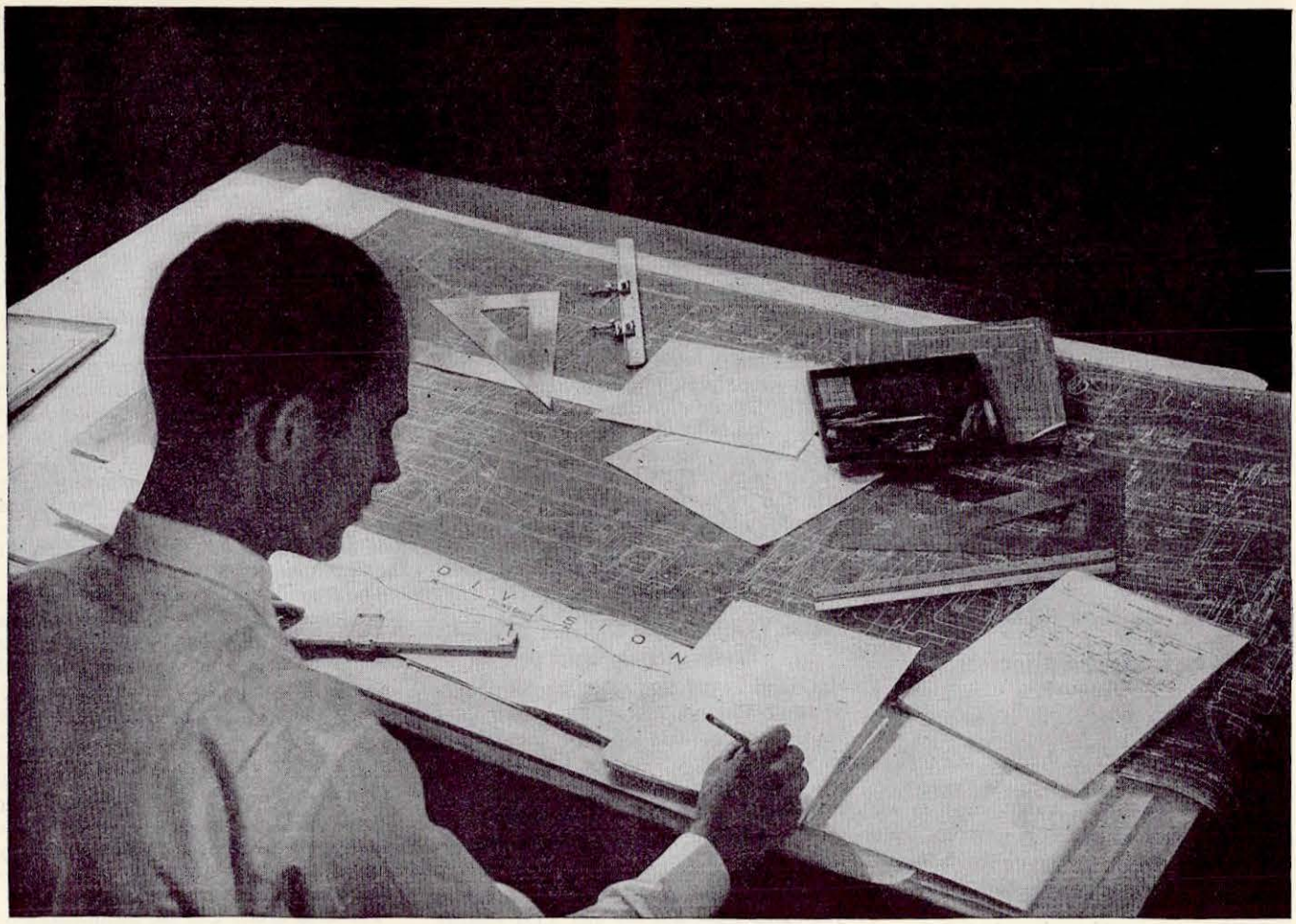
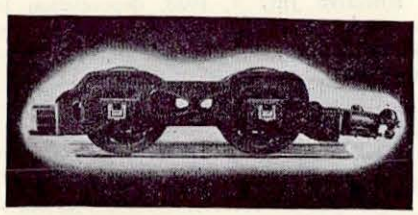


The BOOSTER *will save* LOCOMOTIVE MAINTENANCE



When purchasing new locomotives for any service, determine the power requirements for both high and low speeds, then meet these requirements with an engine having the minimum weight on drivers. Include The Locomotive Booster as an integral part of the design.

Compared with non-Booster engines for the same requirements, there is a substantial saving in maintenance expense as well as first cost. Actual results have shown savings in the maintenance expense as high as $5,000.00 per year per locomotive.

In other instances, Booster engines of lighter weight have been substituted for special services such as milk, express, etc., where high starting effort was necessary, resulting in a 20 cents per mile maintenance expense as compared with a 30 cents per mile on the engine which it superseded—and the service was improved.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK CHICAGO MONTREAL

way carriers. Although one official of the N. R. A. had issued a ruling that any code for water operators would not apply to the Inland Waterways Corporation on the ground that it is a government institution, it is understood that the matter is receiving further consideration and that the question is not yet regarded as definitely settled.

National Railway Appliances Association

At a meeting of the directors of the National Railway Appliances Association on September 5, advice from a considerable number of active member companies showed widespread interest in an exhibit and an attitude favorable toward holding one next March if conditions continue to improve. The association holds an option for the desired dates at the Coliseum, Chicago. A definite decision will be reached at a meeting to be held in December, by which time the plans of the American Railway Engineering Association and the Engineering division, American Railway Association, will be determined.

Railway Employment Increased In August

An increase of 25,749 in the number of employees in the service of Class I railroads, excluding switching and terminal companies, between the middle of July and the middle of August, is shown in the Interstate Commerce Commission's preliminary monthly tabulation of railroad employment. The total for August was 1,014,879. This is the first month to show a total over a million since last October, when the number was 1,016,951. As compared with the low month, March, 1933, this is an increase of 94,998. The total number of employees was 3.49 per cent greater than that in August, 1932, although the number of train and engine service employees increased 11.89 per cent.

Code Filed by Railroad and Transportation Concessionaires

The Railroad and Transportation Concessionaires Association has filed with the National Recovery Administration a proposed code of fair competition for operators of concessions on railroad trains, at railroad stations, bus terminals, and airports, consisting chiefly of news stands, cigar stands, parcel-checking stands, bootblack stands, barber shops, lunch rooms, soda luncheonettes, lodging houses, comfort stations, etc. It proposes maximum weekly hours of employment ranging from 40 for office employees to 56 for other male employees and minimum wages ranging from 23 to 28 cents an hour, depending on the population of the cities, with a differential of 2 cents an hour in states south of the Mason and Dixon line. An executive committee is proposed to administer the code.

A. R. A. Sample Cars Delivered

The five sample steel-sheathed, wood-lined 50-ton box cars of the new A. R. A. type of construction adopted as standard in 1932 have been completed by the Pressed Steel Car Company at its McKees Rocks, Pa., plant. These are the cars which were ordered by the American Railway association from the American Railway Car Institute in March of this year. They are nearly two tons lighter in weight than the steel-sheathed wood-lined box cars of similar capacity which were designed by the Committee on Car Construction in 1923 but never adopted as standard, although approximately 70,000 cars have been built from this basic design. The inside dimensions of the new cars are: Length, 40 ft. 6 in.; width, 8 ft. 9½ in., and height 9 ft. 4 in., the width and height being the largest possible in a car for generally unrestricted interchange service. The cars will now be subjected to rigid tests by the American Railway Association in co-operation with the various railroads to determine whether there may be any possible weaknesses in the structure. The Car Construction Committee is now studying the possibility of bringing about a further reduction in the weight of cars of this design by the use of light-weight alloys without unwarranted first cost for such material.

New York Central Delivers 368,301 Passengers in Chicago

A total of 368,301 passengers were carried into Chicago by the New York Central lines from May 27, 1933, the opening of A Century of Progress Exposition, to September 4. Each month has shown an increase in the number of passengers moved, over the previous 30 days, the total for June being 101,280; for July, 109,965, and for August, 122,405. To handle the 368,301 passengers, there were operated 798 extra train sections and 2,121 regular trains (all carrying extra cars), or 2,919 trains in all.

D. M. Bowman, passenger traffic manager of the New York Central lines, estimates that judging from 2,143 members of the New York State Farm Bureau and many 4-H club parties, the average passenger over the N. Y. C. lines attended the Fair three times. "This is true," said Mr. Bowman, "of more than 12,000 farmers already brought in and probably is a fair average for all traffic. Many remained in Chicago for 10 to 30 days. While many of these were children, the vast majority were grown-ups, representing an admission revenue of between $400,000 and $500,000."

The New York Central's reports from passenger representatives all over the system and bookings of large parties already made, indicate that September will keep up the summer's record and this probably will be true of at least a part of October.

Canadian Wage Dispute

Judge Louis Cousineau, of the Superior Court of Montreal, has been named chairman of a conciliation board appointed to hear the wage dispute between the Canadian National and the Canadian Brotherhood of Railroad Employees, which embraces clerks, freight handlers, laborers and ferry service employees. The appointment was made by Hon. Wesley Gordon, Minister of Labor at Ottawa, failing a recommendation from the two already appointed members, F. Curzon Dobell, of Montreal, and the Rev. Russell McGillivray, of Ottawa.

Another board has been appointed to settle a similar dispute, the decision of the men not to accept the additional 10 per cent reduction proposed by the companies, in the case of the Canadian Pacific and the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees. Its membership is as follows: George S. Currie, of Montreal, representing the company, and W. F. O'Connor, of Aylmer, representing the employees. No chairman has as yet been appointed.

Meanwhile the general conference chairman of the enginemen, trainmen and operators will return to Montreal within the course of the next few days to receive and tabulate the results of the strike ballot which they circulated among their members following the breakdown of their negotiations with the railway companies. The ballot was returnable on September 15 and the first meeting of the chairmen will be held on September 20 when the results of the 25,000 ballots will be made known.

The organizations representing these employees have decided to make Nova Scotia the scene of their legal action with the Canadian Pacific and Canadian National for the return of the monies which they claim were illegally deducted from them after February 1 of this year when the 10 per cent agreement came to an end and the companies introduced an additional 10 per cent reduction after an award in their favor by a board of conciliation. The unions claim that in the absence of any new agreement with them, their wages have been illegally reduced.

The shop crafts and the maintenance of way employees have also broken off their negotiations with the companies, refusing to accept the additional 10 per cent reduction, but they have not yet heard from the companies whether application has been made to the Minister of Labor for the appointment of boards of conciliation to deal with their cases.

B. & O. Changes Depreciation Basis

In a recent report to the New York Stock Exchange, the Baltimore & Ohio stated that for the years 1930, 1931 and 1932, and to June 30, 1933, it had accrued depreciation on equipment by monthly charges to operating expenses on a "service-mile" rate, based on previous ten years experience, the rates in 1933 being:

Locomotives	2.9818 cents per service mile
Freight train cars	.3318 cents per service mile
Passenger train cars	.3939 cents per service mile

Effective July 1, 1933, depreciation is accrued on percentage of ledger value based on the estimated life of the equipment as follows:

Locomotives	3 per cent
Passenger Train Cars	3 per cent
Freight Train Cars:	
Wooden and steel center sills	4 per cent
All other	2½ per cent
Work Equipment:	
Work train cars	5 per cent
Floating Equipment	3 per cent
Miscellaneous equipment (motor driven vehicles)	16.67 per cent

In answer to an inquiry as to the occasion for the change in method of charging the depreciation, an officer of the company stated:

Since 1929 the Baltimore and Ohio Railroad Company had been charging depreciation on equipment on a "service mile basis" developed

Continued on next left-hand page

AMERICAN ARCH COMPANY *Supplies* BALANCED ARCH BRICK SERVICE

Good brick is only one of the ingredients of satisfactory Arch Brick service. American Arch Company supplies the railroads from the pick of the country's brick plants. Here they are:

HARBISON-WALKER REFRACTORIES CO.
Pennsylvania Ohio Kentucky Alabama Missouri

NORTH AMERICAN REFRACTORIES CO.
Pennsylvania Kentucky

IRONTON FIRE BRICK CO.
Ohio

DENVER SEWER PIPE & CLAY CO.
Colorado

ATHENS BRICK & TILE CO.
Texas

MOULDING-BROWNELL CORP.
Ohio

GLADDING-McBEAN & CO.
California
Washington

DIAMOND FIRE BRICK CO.
Colorado

DOMINION FIRE BRICK & CLAY PRODUCTS LTD.
Saskatchewan, Canada

CANADA FIRE BRICK CO., LTD.
Ontario, Canada—Quebec, Canada

In addition, the design and engineering of Locomotive Arches and the expert combustion counsel round out the balanced service that railroads have come to expect from American Arch Company.

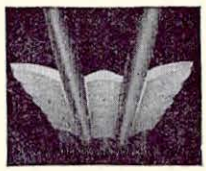
NRA MEMBER U.S. WE DO OUR PART

AMERICAN ARCH COMPANY

INCORPORATED

Locomotive Combustion Specialists

NEW YORK CHICAGO



There's More to SECURITY ARCHES *Than Just Brick*

from its experience in "depreciation and retirements" over twenty-five or more years.

The Commission questioned the method used as not conforming to the general requirements of the accounting regulations that uniform monthly charges be made representing depreciation of equipment, these charges to be based upon the percentage of original cost or ledger value of equipment determined to be equitable from the carrier's experience and best sources of information as to the average current loss from depreciation.

Effective July 1, 1933, the company readopted the percentage basis for depreciation charges.

President Wants Prices of Rails Reduced

President Roosevelt recently has been interesting himself in the possibility of making loans to railroads for the purchase of rails from the public works fund, provided the price of rails can be reduced, and has discussed the matter with Co-ordinator Eastman and representatives of the railroads. He is said to have been informed that the railroads are anxious to make such purchases but to feel that it is a rather anomalous situation that the prices of rails have not been reduced in recent years in proportion to prices of other steel articles. The fact of uniform prices for rails was referred to the Department of Justice for investigation nearly two years ago as a result of agitation by Senator Couzens but, according to the latest information made public, the department is still investigating.

The public works section of the national industrial recovery act authorizes the President, who has delegated his power to the Secretary of the Interior as Public Works Administrator, to aid in the financing of such railroad maintenance and equipment as may be approved by the Interstate Commerce Commission as desirable for the improvement of transportation facilities. It is understood that the public works administration has given some consideration to allocating a considerable sum from the $3,300,000,000 fund at its disposal for such purposes but that in the absence of direct applications from the railroads it has not announced the terms on which the money would be available, preferring to consider that feature in the light of the circumstances presented to it.

Co-ordinator Eastman, in urging the railroads to use every available dollar, as traffic and revenue increase, to put men to work, has also called attention to the fact that money can now be borrowed on favorable terms from the Public Works Administration for railroad equipment and maintenance, saying that no railroad so far had availed itself of this opportunity.

One difficulty with any suggestion for a reduced price for rail lies in the fact that the law governing loans from the public works fund provides among other restrictions, that all contracts let for construction projects and all loans and grants made pursuant to it shall contain provisions that "so far as practicable and feasible," no individual directly employed on any such project shall be permitted to work more than 30 hours in any one week.

Secretary Ickes, the public works administrator, said he had asked the President to take up the question of a reduction in rail prices with the steel companies and that Co-ordinator Eastman would take steps to ascertain what quantity of rails might profitably be used. It is understood that emphasis is being laid on the subject of rail purchases at this time because of the unresponsiveness shown by railroads to the numerous suggestions that they borrow from the public works fund for equipment.

On Wednesday it was stated at the White House that Mr. Eastman would at once submit definite figures from the railroad presidents as to the quantity, after which representatives of the steel companies would be asked to consider the price question.

Equipment and Supplies

LOCOMOTIVES

THE TEXAS COMPANY is inquiring for one 0-4-0 type switching locomotive.

THE WEYERHAEUSER TIMBER COMPANY has ordered one 2-8-8-2 type locomotive from the Baldwin Locomotive Works.

FREIGHT CARS

THE ALASKA RAILROAD is inquiring for 10 ballast-coal cars and 10 dump cars.

THE STAUFFER CHEMICAL COMPANY has ordered one insulated tank car of 10,000 gal. capacity from the General American Transportation Corporation.

THE UNITED STATES NAVY DEPARTMENT —Bureau of Supplies and Accounts, Washington, D. C., is asking for bids on October 3 for 37 railway cars at an estimated cost of $100,900. The inquiry calls for flat, box, hopper and gondola cars of 50 tons' capacity, also some 70-ton flat cars and 30-ton narrow gage flat cars, for delivery at the various navy yards.

IRON AND STEEL

THE NEW YORK CENTRAL contemplates placing an order in the near future for new rail.

THE PITTSBURGH & WEST VIRGINIA has placed an order for about 460 tons of steel with the American Bridge Company, the steel to be used for making repairs to different bridges on this road.

THE CHESAPEAKE & OHIO has ordered 31,480 tons of rails, placing 13,505 tons with the Illinois Steel Company, 10,672 tons with the Inland Steel Company, 4,659 tons with the Bethlehem Steel Company and 2,644 tons with the Carnegie Steel Company.

MISCELLANEOUS

NEW YORK, NEW HAVEN & HARTFORD. —A special-car club has recently equipped three club cars operating on this road with air conditioning control of the Airtrol system furnished by the Rails Company, New York. This equipment is for year-round operation.

Supply Trade

R. L. Giebel has been appointed representative in the New York metropolitan district for the **Morton Manufacturing Company,** Muskegon Heights, Mich., manufacturers of railroad shapers and allied equipment. Mr. Giebel's headquarters are at 1501 Undercliff avenue, New York City.

Grant B. Shipley, Koppers building, Pittsburgh, Pa., has resigned as president of the following companies: The Wood Preserving Corporation, Century Wood Preserving Company, National Lumber & Creosoting Company and Carolina Wood Preserving Company, and has been elected chairman of the board of directors of the **Wood Preserving Corporation.** For the past 28 years Mr. Shipley has taken a very active part in development of the wood preserving industry in the United States and requested that he be relieved of the management of the above companies so that he could devote a part of his time to his own personal interests. Mr. Shipley will be succeeded as president of the Wood Preserving Companies by **Arthur W. Armstrong,** now executive vice-president of these companies and also president of the Ayer & Lord Tie Company, of Chicago.

Maurice N. Trainer, assistant vice-president of the eastern sales department of the **American Brake Shoe & Foundry Company,** New York, has been elected vice-president. After graduating from the University of Pennsylvania in 1910, Mr. Trainer entered the employ of the Public Service Railway Company of New Jersey (now the Public Service Co-ordinated Transport) where he remained until January 1, 1916, when he became service inspector for the American Brake Shoe & Foundry Company. In 1926, he was elected vice-president of a subsidiary company, American Malleables Company, and also vice-president of American Brakeblok Corporation, automotive subsidiary of the Brake Shoe Company. He returned to the Brake Shoe sales department in 1927, and was appointed assistant vice-president of the eastern sales department in 1928, remaining in this capacity until his recent

Maurice N. Trainer

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Build Profits —

into Your Locomotives

THE ELESCO FEED WATER HEATER

When waste can be avoided in locomotives, and capacity increased, fuel saved and efficiency added, locomotives become more profitable. This is accomplished by applying Elesco feed water heaters. They reclaim the heat in a portion — approximately 15 per cent — of the exhaust steam and pass it back into the boiler in the feed water. This is a positive way to build profits into your locomotives.

The principle is sound and the equipment is of a rugged, most practical type, developed by engineers long experienced in locomotive design and operation.

Whether for modernization of existing power or for new power, don't overlook the importance of heat reclamation through Elesco feed water heaters. ***The most profitable power is Elesco-equipped.***

THE SUPERHEATER COMPANY

Representative of AMERICAN THROTTLE COMPANY, INC.

60 East 42nd Street
New York

ELESCO

Peoples Gas Building
Chicago

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Canada: THE SUPERHEATER COMPANY, LTD., MONTREAL

Superheaters . Feed Water Heaters . Exhaust Steam Injectors . Superheated Steam Pyrometers . American Throttles

election as vice-president of the American Brake Shoe & Foundry Company, with headquarters at New York.

Railway Supply Companies Under Various N.R.A. Codes

Manufacturers of railway supplies and equipment are included in many of the various codes of fair competition which have been submitted to and are now being considered by the National Recovery Administration, as well as in that for the iron and steel industry which is already in effect. Many such companies are interested in the code for the steel castings industry on which a hearing was held on September 7 at Washington before Deputy Administrator H. O. King. The proposed code for this industry, as submitted, provided for an average working week of 40 hours, with provision for 48 hours in peak periods, and divides the country into 21 districts for wage purposes with minimum rates ranging from 25 cents an hour in certain southern districts to 40 cents in the Pittsburgh, Wheeling, Chicago, and St. Louis districts. F. B. Ernst, vice-president of the American Steel Foundries, and Keith Williams, of Buffalo, were selected as industrial advisers for the N. R. A. for the consideration of this code. As a result of last-minute changes made in the definitions section of the code, objections which had been lodged were withdrawn by a number of companies, including the American Locomotive Company, the Baldwin Locomotive Works, the General Steel Castings Company, and the Machinery and Allied Products Institute. The Lorain Steel Company sent a letter suggesting that companies who are under the iron and steel code but do steel casting be given the option of deciding which code they which to operate under.

W. C. Dickerman, president of the American Locomotive Company, was appointed adviser to the administration for the heat exchange, compressed air, and pump manufacturing industries.

The Association of Manufacturers of Chilled Car Wheels has submitted to the National Recovery Administration a proposed code of fair competition providing for an average of 40 hours a week for employees in any six months period and a maximum of 48 hours a week, with a minimum of 40 cents an hour for factory or mechanical workers or artisans.

The Wood Preserving Industries Association has obtained approval of a substitute for the President's Reemployment Agreement.

A proposed code has been submitted by the Association of Manufacturers of Railway Brass Car and Locomotive Journal Bearings and Castings.

THE PENNSYLVANIA has made arrangements with the Grace Line for "circle-trip" tickets to and from California, by rail one way and by Panama Canal the other. Under the plan tickets "at attractively low fares" will be sold from all points on the Pennsylvania — starting point to starting point—with the usual stop-overs in the Spanish-American countries served by the Grace Line and also at the Yellowstone and the other national parks in the United States.

Construction

ATCHISON, TOPEKA & SANTA FE.—The Interstate Commerce Commission has authorized this company to construct a branch line extending from a point near Carlsbad, N. Mex., northeasterly about 20 miles. The new line will serve a potash refinery. The company which is erecting this plant has contracted with the carrier to ship at least 450,000 tons of out-bound freight within five years after the line is completed, or to pay a dollar a ton for every deficiency in this tonnage. The estimated cost of construction is $431,254.

CHICAGO, ROCK ISLAND & PACIFIC.—Bids have been asked by the state highway department of Oklahoma for the construction of a reinforced concrete and steel highway overpass over the tracks of the Rock Island at Bridgeport, Okla., at an estimated cost of $140,000.

ERIE.—The New York Public Service Commission has approved several orders in connection with the elimination of the grade crossings of this railroad in Elmira, N. Y. There are sixteen crossings involved in the elimination project. One of the orders approved was a low bid at $15,225, submitted by the American Bridge Company for furnishing and delivering steel for the Pennsylvania avenue bridge. The Commission also approved a proposal of H. E. Culbertson & Company, the general contractors, covering various items of additional work not shown on the plans or covered by the specifications. As reported in the *Railway Age* of June 24, the commission had previously approved plans and an estimate of cost of $655,600 for four stages of the work.

PENNSYLVANIA.—The New York Public Service Commission has approved specifications and an estimate of cost of $32,700 for track changes and bridge structure in connection with the elimination of this road's grade crossing, located on the Portville-Carroll county highway in the town of Portville, Cattaraugus county, N. Y. The commission has also affirmed its order directing the elimination of the Caton Avenue crossing, of this road, in the town of Southport, Chemung county, N. Y.

Financial

CENTRAL OF NEW JERSEY.—*Abandonment.*—The Interstate Commerce Commission has authorized this company to abandon that part of its Belford branch extending from a point near its junction with the Freehold & Atlantic Highlands branch in Monmouth County, N. J., southerly to a point on the Navesink river, 4.3 miles.

CHESAPEAKE & OHIO.—*Abandonment.*—The Interstate Commerce Commission has authorized this company to abandon that part of its Greenbrier subdivision extending from a point near Bartow, W. Va., to the end of the line at Winterburn, 2.8 miles.

CHICAGO & EASTERN ILLINOIS.—*R. F. C. Asks Appointment of Trustees.*—The Reconstruction Finance Corporation has filed with the United States district court at Chicago a motion asking the immediate appointment of a trustee or trustees to take over the operation of this property, with a view to the presentation of a plan of reorganization, stating that "a disinterested trustee or trustees can and will give adequate consideration to the interests of all classes of creditors and stockholders," and that a trustees' plan will meet with more general acceptance than a plan devised by the debtor or by any class of creditors.

CHICAGO, BURLINGTON & QUINCY.—*Abandonment.*—The Interstate Commerce Commission has authorized this company to abandon that portion of its Osceola-Leon, Ia., branch extending from Osceola to Van Wert, 11.1 miles, and from Decatur City to Leon, 6.5 miles.

CHICAGO, BURLINGTON & QUINCY.—*Trackage Rights.*—The Interstate Commerce Commission has authorized this company to operate under trackage rights over the Baltimore & Ohio Southwestern between Shattuc, Ill., and East St. Louis, 54.2 miles.

ILLINOIS TERMINAL.—*Abandonment.*—The Interstate Commerce Commission has authorized this company and Illinois Traction, Inc., to abandon a branch extending 7.8 miles westerly from Hillsboro, Ill., and another extending 5 miles northerly from Ridge Farm.

MISSISSIPPI CENTRAL.—*Note.*—The Interstate Commerce Commission has authorized this company to issue a promissory note for $150,000 to be delivered to the United States Lumber Company in payment for advances.

PENNSYLVANIA.—*New Director.*—M. W. Clement, vice-president in charge of operation of this company, has been elected also a director to fill the place vacated by the death of Elisha Lee. The directors elected F. J. Fell, vice-president and comptroller, a director to fill the directorship occupied by Mr. Clement.

ST. LOUIS-SAN FRANCISCO.—*Abandonment of Operation.*—The Interstate Commerce Commission has authorized the receivers of this company to abandon operation of that part of its Tipperary branch extending from McDougal, Ark., southwesterly to Tipperary, 8.9 miles.

ST. LOUIS SOUTHWESTERN.—*Operation.*—The Interstate Commerce Commission has authorized the St. Louis Southwestern of Texas to operate over the railroad and terminal facilities of the Dallas Terminal Railway & Union Depot Company, comprising 3.5 miles of main line track and 10.9 miles of yard tracks.

SOUTHERN PACIFIC. — *Abandonment.* — This company has applied to the Interstate Commerce Commission for authority to abandon part of the Rumsey branch, from Capay, Calif., to Rumsey, 18.059 miles.

SOUTHERN PACIFIC. — *Abandonment.* — The Interstate Commerce Commission has authorized this company and the South Pacific Coast, a subsidiary, to abandon ap-

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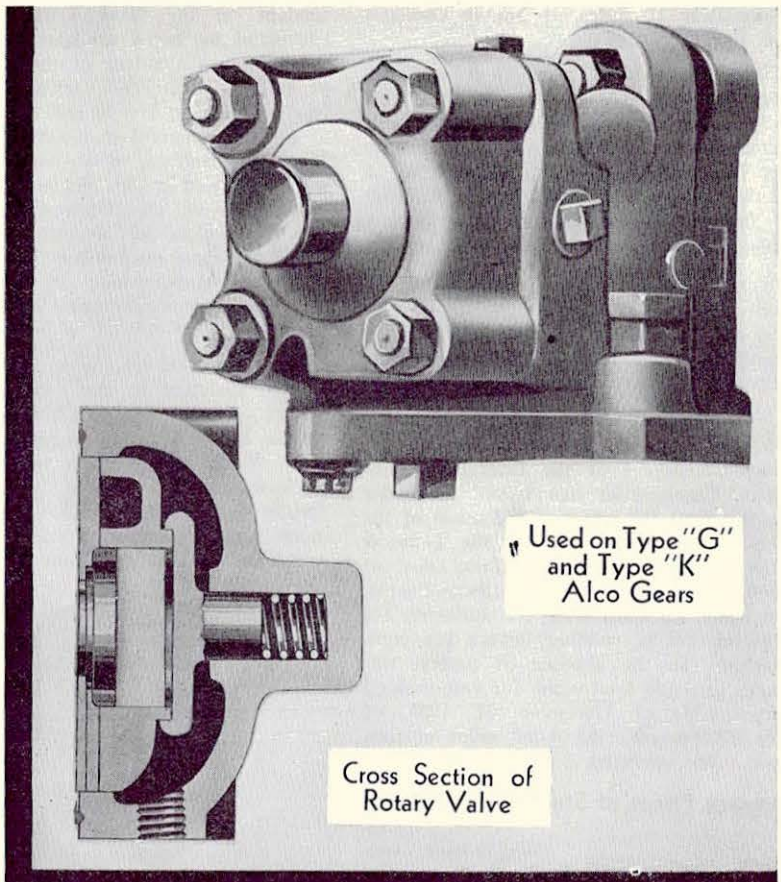
Alco REVERSE GEAR FACTS



THE ROTARY VALVE

The Heart of the Gear

is a distinctive feature which gives ALCO Reverse Gears many important operating advantages.

EFFICIENCY. This packless flat rotary valve has long demonstrated its efficiency and reliability in air-brake operation.

SENSITIVITY. It is easy to operate and very sensitive to slight movements of the reverse lever or piston.

ACCURACY. The valve seats properly at all times, eliminating faulty action of the gear through the valve lifting.

SIMPLICITY. This type of valve eliminates the troublesome stuffing box on the valve stem. The valve body has brass bushings to permit the taking up of excess lost motion.

ECONOMY. The entire valve may be easily and quickly removed for grinding or repairs without disturbing or removing the gear. The same valve is used on both the type "K" and type "G" ALCO Gears.

American Locomotive Company
30 Church Street New York N.Y.

proximately 10 miles of line in Oakland and Berkeley, Calif.

SPOKANE INTERNATIONAL.—*Reorganization Proposed.*—This company has filed with the federal district court for the eastern district of Washington and with the Interstate Commerce Commission a petition stating that it is unable to meet its indebtedness and desires to effect a reorganization under the bankruptcy law.

STANLEY MERRILL & PHILLIPS.—*Abandonment.*—The Interstate Commerce Commission has authorized this company to abandon as to interstate and foreign commerce its line extending from Polley, Wis., to Walrath, 22 miles.

TEXAS & NEW ORLEANS.—*Final Valuation.*—Division 1 of the Interstate Commerce Commission has issued an order making final the tentative valuation of the property owned and used by the Texas & New Orleans and affiliated lines, know as the Atlantic system of the Southern Pacific, for which an application for authority for consolidation is pending before the commission. In the absence of protest this makes final the final value for rate-making purposes as of December 31, 1931, of $251,078,868, covering 4,659 miles of first main track operated.

Average Prices of Stocks and of Bonds

	Sept. 12	Last week	Last year
Average price of 20 representative railway stocks..	47.58	47.57	27.55
Average price of 20 representative railway bonds..	71.51	72.15	65.19

Dividends Declared

Cincinnati Union Terminal.—5 Per Cent Preferred, $1.25, quarterly, payable September 30 to holders of record September 20.

Railway Officers

EXECUTIVE

William F. Schaff, general manager of the New York Central, Line West of Buffalo, and of the Ohio Central Lines, who has been appointed vice-president and general manager of these lines, as noted in the *Railway Age* for September 9, page 383, has been connected with the New York Central and its affiliated roads for 39 years. He entered railway service on April 1, 1894, as a clerk on the Cleveland, Cincinnati, Chicago & St. Louis at Springfield, Ohio, later being transferred to Columbus, Ohio. In September, 1895, he was advanced to yardmaster at Louisville, Ky., and in September, 1904, he was further promoted to general yardmaster at Indianapolis, Ind. Two years later Mr. Schaff was appointed trainmaster at Indianapolis, and was later transferred to Galion, Ohio. In June, 1909, he was transferred to the Lake Shore & Michigan Southern where he served successively as assistant superintendent at Youngstown, Ohio, Buffalo, N. Y., and Cleveland, Ohio, and superintendent at Detroit, Mich. In March, 1915, he was appointed superintendent on the New York Central at Cleveland and two years later he was made general superintendent of the Lines West of Buffalo, with headquarters at Chicago. In March, 1926, Mr. Schaff was promoted to assistant general manager of the Line West of Buffalo, with headquarters at Cleveland, and in 1931 his jurisdiction was extended over the Ohio Central Lines. His promotion to general manager at Cleveland came on January 1, 1932, while his recent appointment as vice-president and general manager became effective on September 1.

George Herbert, who has been appointed assistant to the vice-president in charge of traffic of the Delaware, Lackawanna & Western, with headquarters at New York, entered the service of the Lackawanna as a stenographer in the freight department in 1907. He was promoted to the position of traveling freight agent at New Haven, Conn., in 1918, and

George Herbert

in 1920 he was appointed representative in the general freight traffic manager's office. He was promoted to the position of assistant general freight agent in April, 1929, in which capacity he served until his recent promotion.

FINANCIAL, LEGAL AND ACCOUNTING

F. A. Wright, assistant to the real estate agent of the Nashville, Chattanooga & St. Louis, has been promoted to real estate agent, with headquarters at Nashville, Tenn., to succeed **H. H. Cartwright,** deceased.

John C. Parker, cashier of the Boston & Maine has been appointed assistant treasurer, with headquarters at Boston, Mass., succeeding **Edward J. Gallagher,** promoted. Mr. Parker has been in the service of the B. & M. since 1906.

J. M. McGaughey, secretary, treasurer and general accountant of the Missouri & North Arkansas, with headquarters at Harrison, Ark., has been appointed also auditor of disbursements. **G. M. Toney** has been appointed auditor of receipts, with headquarters also at Harrison.

Edward J. Gallagher, assistant treasurer of the Boston & Maine, with headquarters at Boston, Mass., has been appointed treasurer, with the same headquarters, succeeding **C. N. Marland,** deceased. Mr. Gallagher is also treasurer of the Boston & Maine Transportation Company, the railroad's highway subsidiary. He was

Edward J. Gallagher

born at St. John, New Brunswick on July 3, 1887, and was graduated from Harvard College in 1912. He entered the service of the Boston & Maine in the same year as secretary to the vice-president in charge of finance and accounting, serving in that position until 1925, when he was appointed assistant to the vice-president. He has served also as assistant treasurer of the railroad and as treasurer of the Boston & Maine Transportation Company, its highway subsidiary, since 1928.

OPERATING

Grover Cleveland Nichols, who has been appointed general superintendent of the Alabama, Tennessee & Northern, with headquarters at York, Ala., was born on September 19, 1885, at Jonesboro, Ark. He attended the elementary and high schools and entered railroad service in June, 1901, as call boy for the St. Louis Southwestern at Jonesboro. He served consecutively with that road until 1908 as call boy, timekeeper, storekeeper, and machinist's apprentice. On the latter date he was appointed machinist at Pine Bluff,

Grover Cleveland Nichols

Ark. In 1910 he became master mechanic for the Jonesboro, Lake City & Eastern (St. Louis-San Francisco). From October, 1912, to August, 1913, Mr. Nichols

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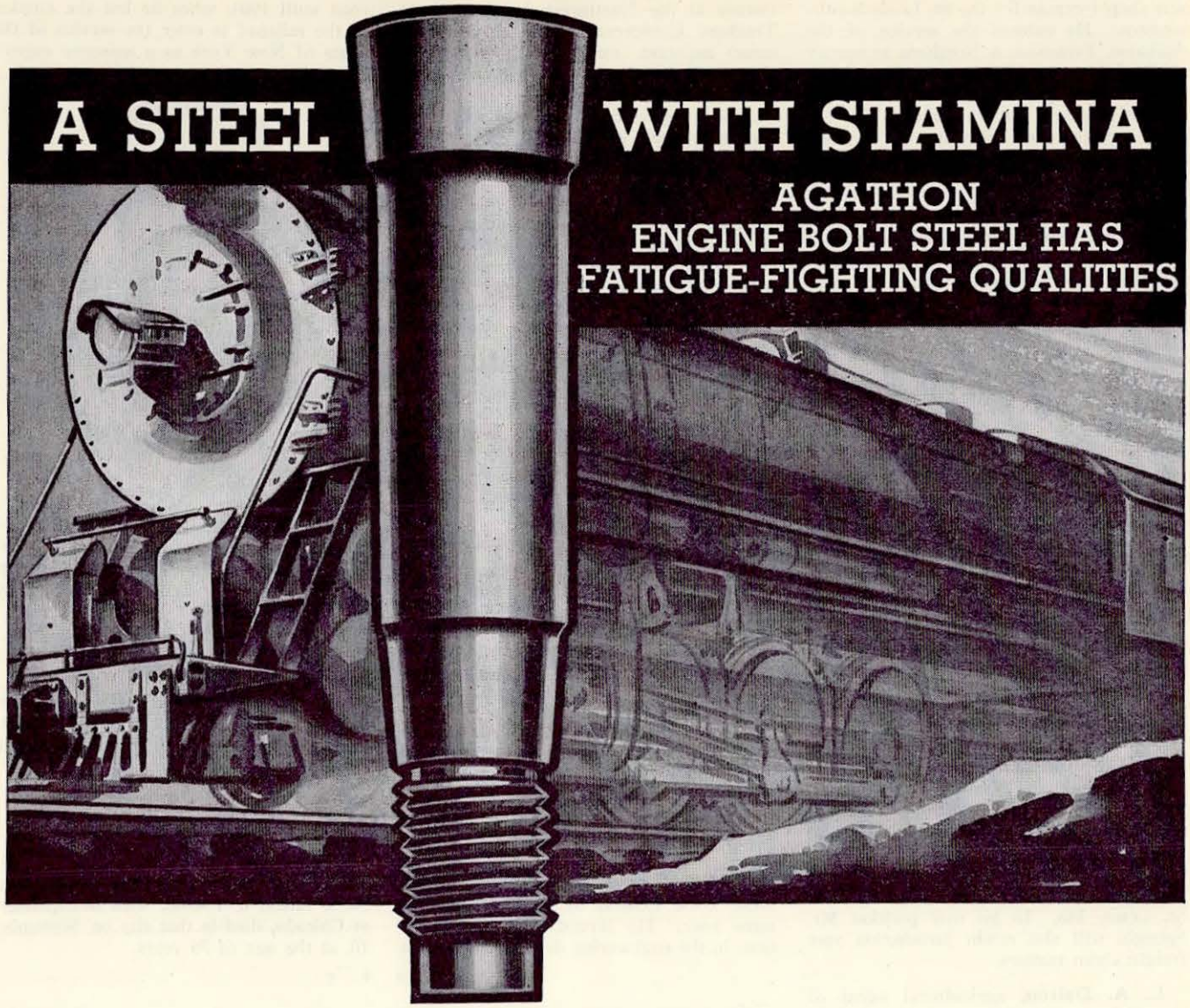

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AGATHON ENGINE BOLT STEEL HAS FATIGUE-FIGHTING QUALITIES

Fatigue finally crumples the resistance of ordinary steel, making it unfit for engine bolts and other parts subject to shock and vibration. « « Years ago, the metallurgists of Republic Steel Corporation began their research for a steel that would withstand repeated shocks; that would resist fatigue better than the old steels but still retain the uniformity of composition that makes steel desired over wrought iron. « « From years of patient development in the country's largest metallurgical laboratories has come Agathon Engine Bolt Steel—a steel that possesses the desired fatigue resistance, ease of machining and ductility. « « So well does this steel supply the demands for a better engine bolt material that many large railroads have standardized on it.

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AGATHON STEELS
TRADE MARK

was shop foreman for the St. Louis Southwestern. He entered the service of the Alabama, Tennessee & Northern as master mechanic on the latter date and in May, 1918, he was promoted to superintendent of motive power and equipment. He became superintendent of that road in June, 1920, in which capacity he served until his recent promotion.

Daniel Healy, trainmaster on the Northern Pacific, with headquarters at Livingston, Mont., has been promoted to assistant superintendent, with the same headquarters, to succeed **James A. Mercer,** who has been transferred to Fargo, N. D., where he replaces **Harry D. Mudgett.** Mr. Mudgett has been transferred to Seattle, Wash., to succeed **John J. McCullough,** who has retired.

TRAFFIC

W. H. Frazier, traveling freight agent on the Southern Pacific, has been appointed also livestock agent, with headquarters at San Antonio, Tex., to succeed **Nat Parks,** deceased.

James J. Brogan, foreign freight agent for the Atchison, Topeka & Santa Fe, with headquarters at Chicago, has been appointed to the newly-created position of general freight agent with the same headquarters.

F. R. Spurgin, freight claim agent of the Fort Smith & Western, has been appointed general freight agent, with headquarters as before at Ft. Smith, Ark., to succeed **Vernon Gaston,** who has resigned to go with the Missouri-Kansas-Texas as assistant general freight agent at St. Louis, Mo. In his new position Mr. Spurgin will also retain jurisdiction over freight claim matters.

L. A. Dalton, agricultural agent of the Delaware, Lackawanna & Western, with headquarters at Binghamton, N. Y., has been appointed general dairy agent,

L. A. Dalton

with headquarters at Chicago, succeeding **J. H. Christy,** whose promotion to assistant western traffic manager at Chicago was announced in the *Railway Age* of August 5. Mr. Dalton was graduated from the University of Missouri. For three years he was professor of agriculture at the Northwest Missouri State Teachers' Conference and in 1922 he became assistant extension professor at Cornell University, continuing this work until he entered the service of the Lackawanna as agricultural agent in 1927. In connection with his duties incident to the supervision of the Lackawanna's dairy and poultry traffic, Mr. Dalton will also co-operate with the producers and dealers in these commodities on the development of satisfactory markets; he will also co-operate with producers in such matters as prices and profits for their agricultural commodities.

ENGINEERING AND SIGNALING

M. McKimmey, resident engineer of the Missouri & North Arkansas, has been appointed to the newly-created position of chief engineer, with headquarters as before at Harrison, Ark.

F. B. Wiegand, signal engineer of the New York Central, Line West of Buffalo, with headquarters at Cleveland, Ohio, has had his jurisdiction extended to include the Line, Buffalo and East, following the retirement of **William H. Elliott,** signal engineer of the latter territory, which was noted in the *Railway Age* of September 9, page 384.

J. W. Pfau, who has been appointed chief engineer of the New York Central, with headquarters at New York, was born on September 18, 1876, at Troy, N. Y. He was graduated from the Rensselaer Polytechnic Institute in that city in 1899 and entered the employ of the New York Central as chainman in the same year. He served in various positions in the engineering department of that road until 1904, when he left the employ of the railroad to enter the service of the State of New York as a masonry expert,

J. W. Pfau

remaining in that capacity until 1906, when he re-entered the engineering department of the New York Central, where he has served continuously since that time.

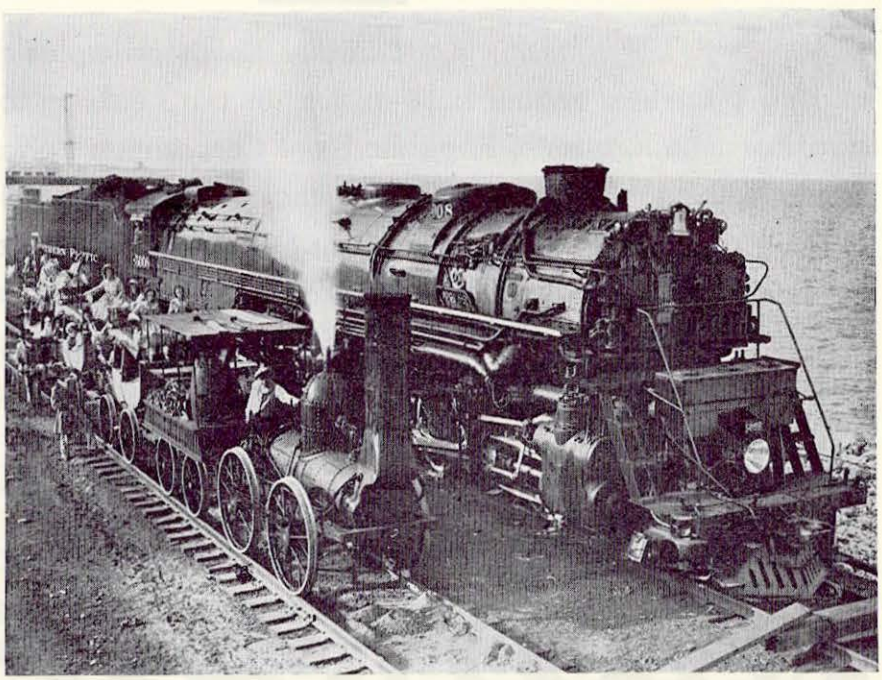
SPECIAL

C. J. Birchfield, advertising manager of the Atchison, Topeka & Santa Fe, with headquarters at Chicago, has had his title changed to general advertising manager.

OBITUARY

Harvey A. Snyder, who retired in 1917 as general freight agent on the Chicago, Rock Island & Pacific, with headquarters at Chicago, died in that city on September 10, at the age of 76 years.

* * * *



A Century of Progress in Transportation

Here is the DeWitt Clinton, first locomotive of the line that was to become the New York Central, and its string of cars, alongside of a modern locomotive. This pioneer train which in its entirety is shorter than a single modern locomotive is shown in the pageant "Wings of Transportation" which is one of the features of the Chicago World's Fair.

The New PACKING CODE

RAILROADS throughout the country are rapidly standardizing on HUNT-SPILLER *Duplex* Sectional Packing.

As though the movement was planned a concerted drive is taking place to eliminate leaky cylinders and the resultant waste of power and fuel.

Performance reports indicate unusually successful results—leaks and blows are no longer a problem. Locomotives show more "pep"—handle trains better and require less fuel per ton mile.

The increased mileage between renewals has effected large savings in cylinder maintenance cost. Has your road tried HUNT-SPILLER *Duplex* Sectional Packing? Why not investigate.

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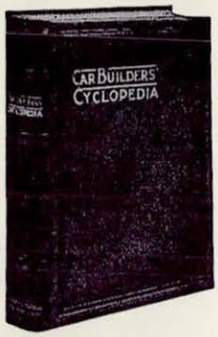
Practical Books for Mechanical Men



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of American Practice

Edited by Roy V. Wright

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Prepared under the auspices of the Mechanical Division of the American Railway Association this book is indispensable to car shop superintendents, master car builders, general foremen and others in charge of the construction and repair of rolling stock. The Thirteenth Edition contains new equipment, standard specifications, recommended practices, scale drawings, illustrations, and technical data regarding all kinds of manufactured products used in car work.

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Furnishes all the information necessary to pass an examination for the position of locomotive or boiler inspector. One hundred and sixty-two questions are given which might well form the basis of the examination for inspectors. All Federal laws, rules and requirements of the Interstate Commerce Commission are included.

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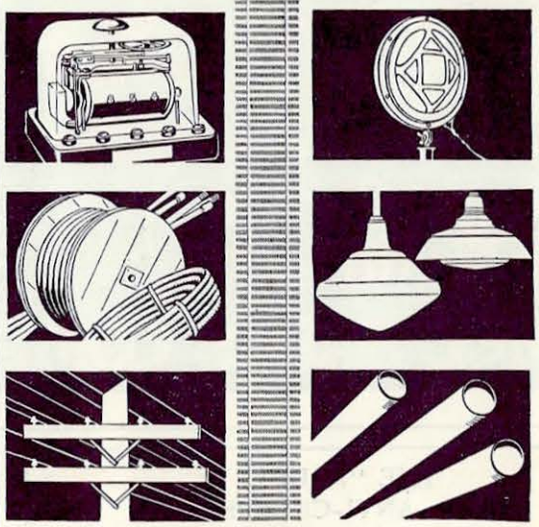

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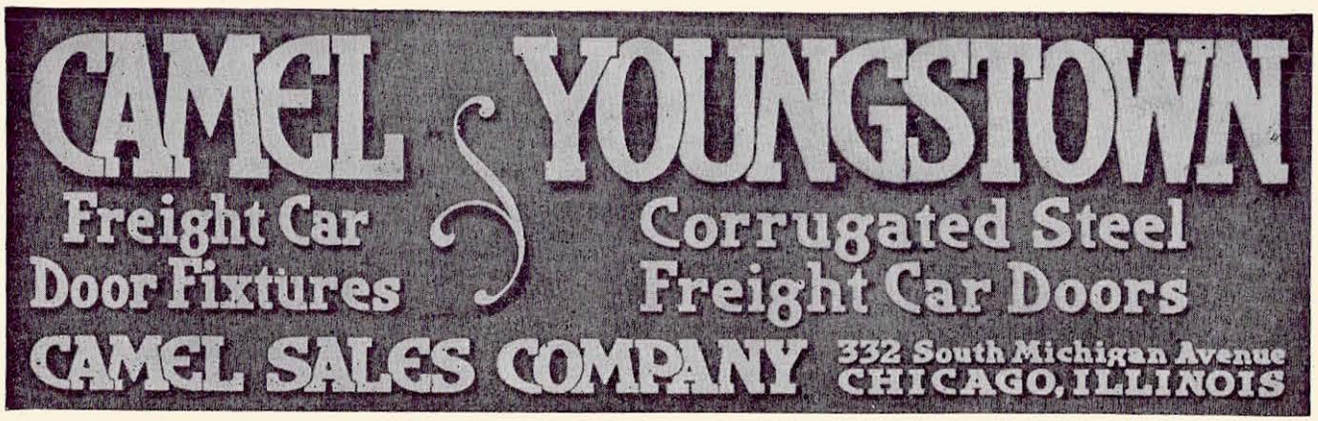

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TOLEDO, OHIO

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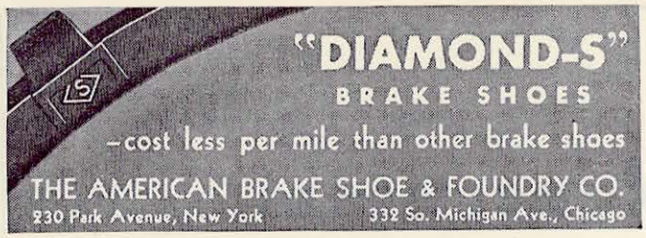
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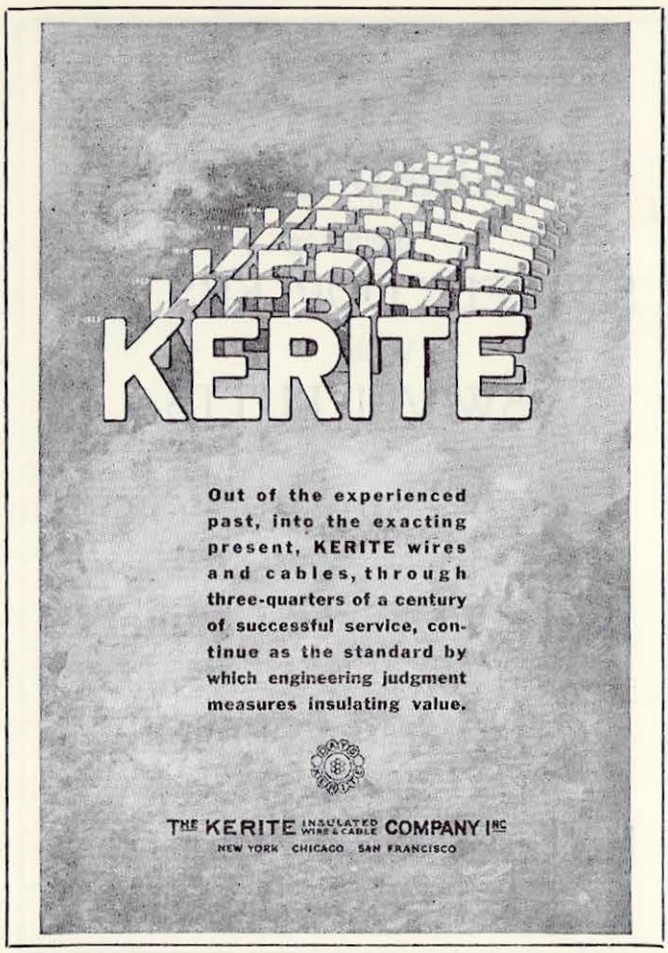
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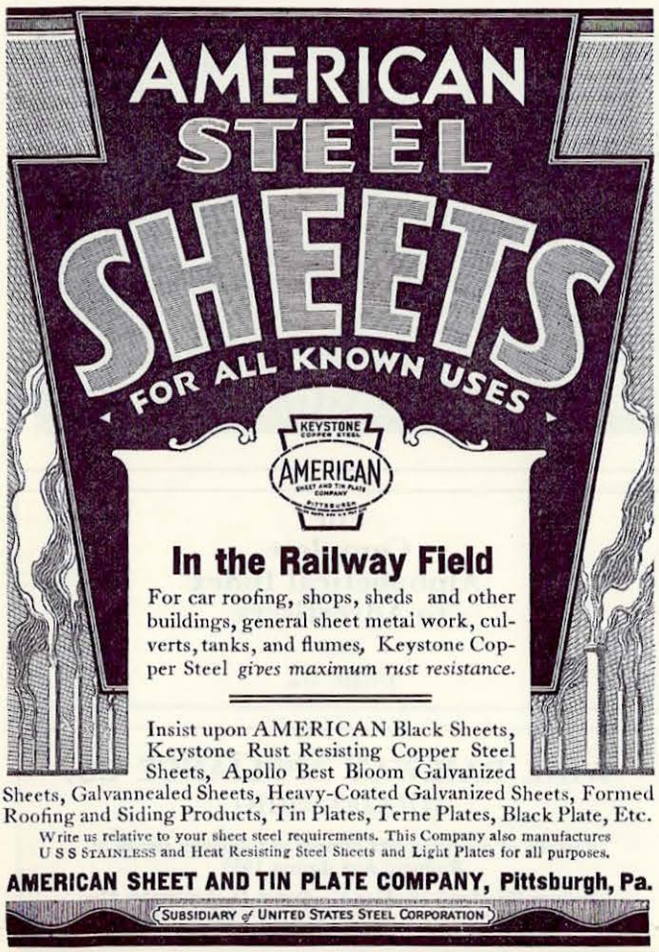
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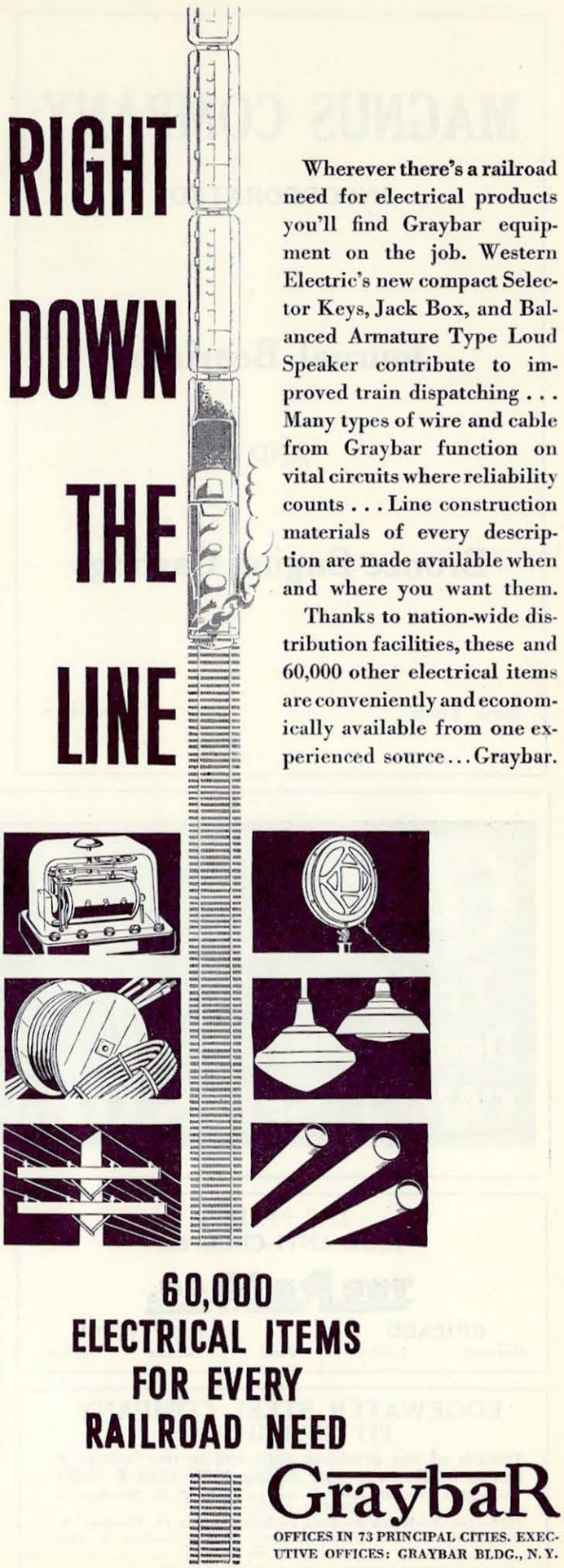
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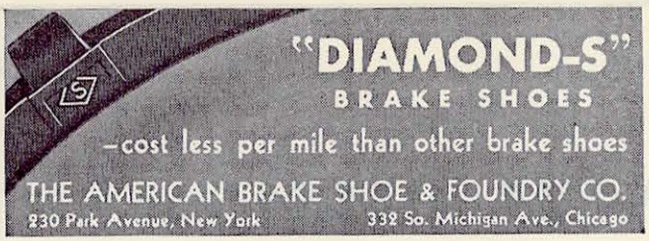
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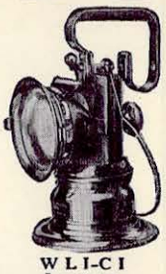

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PHILADELPHIA NEW YORK EDDYSTONE
BELMONT INTERLOCKING CHANNEL FLOOR
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Your name should appear before the readers of this publication.

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THE Railway Educational Bureau, Omaha, Neb., offers a distinctive education service for Supervisors and other employes. Write for FREE Special Bulletin.

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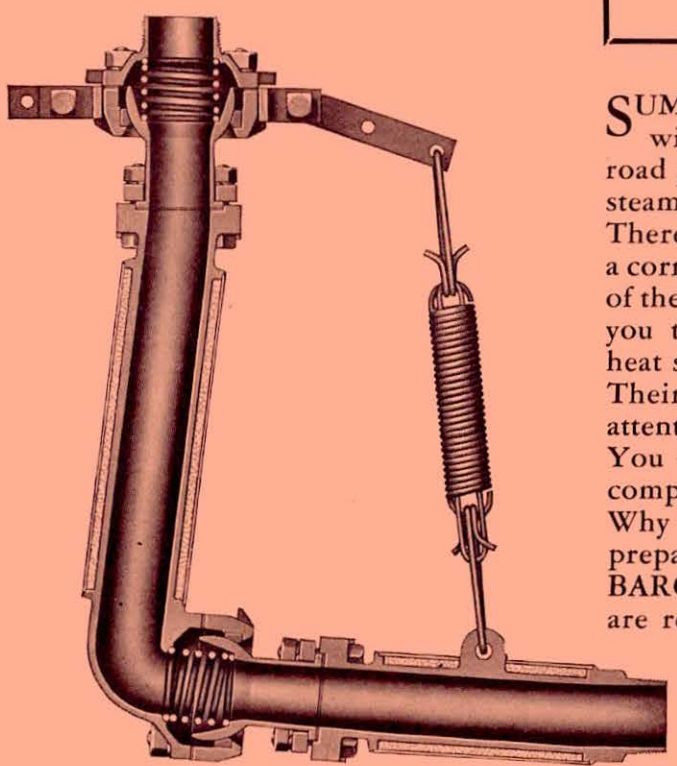

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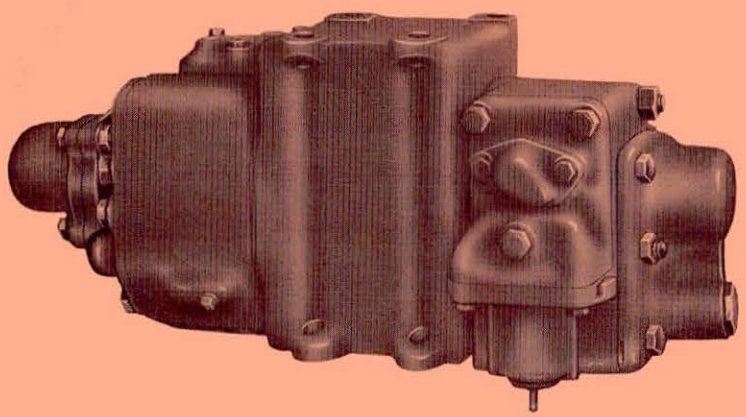

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General Office and Works, Wilmerding, Penna.

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